KERAMIDA
ENGINEERS • SCIENTISTS • PLANNERS
GLOBAL EHS & SUSTAINABILITY SERVICES

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ASBESTOS INSPECTION
TOCON PROPERTY
1302 EAST MONROE STREET
GOSHEN, INDIANA
KERAMIDA PROJECT NO. 15780

Submitted to:

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Partner
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Submitted by:

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401 North College Avenue
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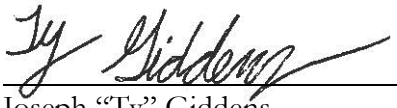
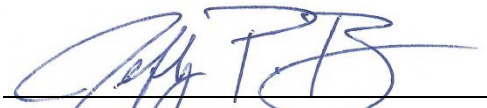
Prepared by:

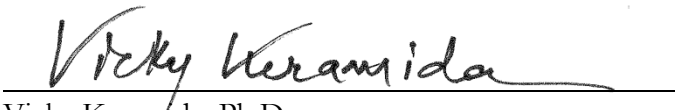


Joseph "Ty" Giddens
Project Manager



Jeffrey Rechtin, C.H.M.M., CIEC
Project Manager

Reviewed by:



Vicky Keramida, Ph.D.
CEO and Chief Technical Officer

February 4, 2016

TABLE OF CONTENTS

ATTACHMENTS

ASBESTOS INSPECTION
TOCON PROPERTY
1302 EAST MONROE STREET
GOSHEN, INDIANA
KERAMIDA PROJECT NO. 15780

FIELD ACTIVITIES

On January 29, 2016 KERAMIDA Inc. (KERAMIDA) conducted a visual inspection of the demolition debris located at the TOCON Property, at 1302 East Monroe Street in Goshen, Indiana (Site). The visual inspection was conducted by Dr. Vicky Keramida, Mr. Steven Cobb, and Mr. Jeffrey Rechtin of KERAMIDA. Mr. Cobb and Mr. Rechtin are Licensed Asbestos Project Designers. They were accompanied by Mr. Rod Michael and Ms. Melissa Gardner from Taft Stettinius & Hollister LLP (Taft) and Mr. John Ulmer from Yoder, Ainley, Ulmer and Buckingham. Approval for access was granted by the Chapter 7 Trustee's counsel, Mr. Jim Young. A copy of the resumes of the KERAMIDA professionals are included in Attachment 1. Limited conditions applied during the visual inspection as a thick layer of ice and a light layer of snow covered the majority of the Site. Observations from the visual inspection are listed below:

- Demolition debris piles were present at the TOCON site (see Photograph #1 and #2, Attachment 2, for views of the pile closest to the eastern building and Photograph #3 for a view of the pile closest to the western building).
- The debris piles were both above ground and below ground, filling basements and former loading docks.
- The former loading docks were filled with demolition debris to surface grade level.
- Several "air pockets" were observed on the east end of the former Administrative Office Building. The "air pockets" allowed for limited access to complete a visual inspection in the administrative office basement (see Photograph #2, Attachment 2).
- Several pipes with intact insulation were observed in one "air pocket". The pipes were located in the same general area as pipes known to contain asbestos, as detailed in the *2006 Demolition Asbestos Survey Report of Johnson Controls* completed by MicroAir, Inc. and issued on February 13, 2006.

Based on the findings of the visual inspection, and after approval for sampling was granted by Mr. Jim Young, KERAMIDA remobilized to the Site on February 1, 2016 to conduct an asbestos survey/inspection (Inspection) of the demolition debris piles. KERAMIDA's representatives included Mr. Joseph "Ty" Giddens, a Licensed Asbestos Inspector, who performed the Inspection, Mr. Jeffrey Rechtin, and Ms. Chelsea Conduitt who provided safety support during the Inspection. They were accompanied by the same legal representatives who were present on January 29, 2016. The weather conditions for the Inspection were sunny and approximately 45 degrees. No areas were visibly obscured by snow or ice. Observations from the Inspection are listed below:

- The debris piles appeared the same as during the visual inspection conducted on January 29, 2016.
- An attempt was made to collect a sample of the pipe insulation in the basement of the east building, through the "air pocket". The sample collected appeared to be primarily from the outer cover of the pipe. Due to safety concerns and accessibility of the pipe, a complete sample of insulation could not be obtained.
- Not all piles were sampled due to safety concerns.
- The demolition debris was mostly crumbled building materials crushed as a result of demolition and relocation and compaction of the debris (see Photos #1, #2 and #3, Attachment 2).
- All samples from tiles, vinyl flooring and cement wall were collected from crumbled materials in poor condition.
- All samples from roofing compounds were collected from weathered materials in poor condition.

SAMPLING AND ANALYSIS

KERAMIDA collected a total of 115 samples of suspect asbestos containing materials (SACM) from the debris piles for laboratory analysis. The following SACMs were collected:

- Crumbled floor tile and associated mastic
- Duct insulation
- Duct tape wrap
- Pipe insulation debris
- Crumbled vinyl flooring (linoleum)
- Weathered roof flashing
- Crumbled cement wall covering (transite)
- Gaskets

The samples were collected in general accordance with KERAMIDA SOPs, Attachment 3. The samples were collected directly into individual sample bags and labeled with a unique identifier. The samples were analyzed by EMSL Analytical Laboratories (EMSL) located in Indianapolis, Indiana by

Polarized Light Microscopy (PLM) by U.S. Environmental Protection Agency (USEPA) Method 600/R-93/116.

The PLM results are summarized in the enclosed Asbestos Analytical Results Table. The enclosed Figure 1 shows the location of the samples which tested positive for asbestos. A copy of the laboratory report is included in Attachment 4. As shown in the Asbestos Analytical Results Table, 47 samples tested positive containing asbestos above the regulatory limit of one percent. The following asbestos containing materials (ACMs) were identified:

- Crumbled floor tile and mastic
- Duct insulation
- Duct tape wrap
- Pipe insulation debris
- Crumbled vinyl flooring (linoleum)
- Weathered roof flashing
- Crumbled cement wall covering (transite)

According to both the USEPA and the Indiana Department of Environmental Management (IDEM), the duct insulation, duct tape wrap, and pipe insulation are classified as friable ACM. When in good condition, the cement wall covering is a Category II non-friable ACM and the asphalt roofing products, vinyl flooring and floor tile are a Category I non-friable ACM. However, based on observations at the Site and due to the crushing of the materials during demolition and moving of the piles, these materials would be characterized as regulated ACM (see Attachment 5 for 326 IAC 14-10 and Attachment 6 for IDEM Guidance).

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Asbestos Analytical Results
Sampled February 1, 2016
TOCON Property
Goshen, Indiana
KERAMIDA Project No. 15780

Sample	Description	Appearance	Asbestos % Type
KA01A	Basement - east end of East Building Debris Pile 1x1 Ceiling/Wall Tile	Brown Fibrous Homogeneous	None Detected
KA01B			None Detected
KA01C		Brown/White Fibrous Homogeneous	None Detected
KA02A-Floor Tile	East end of East Building Debris Pile Crumbled 9x9 Black Floor Tile	Black Non-Fibrous Homogeneous	**5% Chrysotile**
KA02A-Mastic			None Detected
KA02B-Floor Tile			**5% Chrysotile**
KA02B-Mastic			None Detected
KA02C-Floor Tile			**5% Chrysotile**
KA02C-Mastic			None Detected
KA03A	Basement Pipe Insulation	Brown Fibrous Homogeneous	None Detected
KA03B			None Detected
KA03C			None Detected
KA04A	East end of East Building Debris Pile Insulation Debris	Gray Fibrous Homogeneous	**20% Chrysotile**
KA05A	Basement Duct Insulation	Brown/Gray Fibrous Homogeneous	**25% Chrysotile**
KA05B		Gray Fibrous Homogeneous	**30% Chrysotile**
KA05C			**30% Chrysotile**
KA06A-Floor Tile	East Building Debris Pile Crumbled 9x9 Gray Floor Tile	Beige Non-Fibrous Homogeneous	**5% Chrysotile**
KA06A-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA06B-Floor Tile		Beige Non-Fibrous Homogeneous	**4% Chrysotile**
KA06B-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA06C-Floor Tile		Gray Non-Fibrous Homogeneous	**4% Chrysotile**
KA06C-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA07A-Floor Tile	East Building Debris Pile Crumbled 12x12 Cream Floor Tile	Tan Non-Fibrous Homogeneous	None Detected
KA07A-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA08A	East Building Debris Pile Crumbled Blue Sheet Flooring	White/Blue Non-Fibrous Homogeneous	None Detected
KA08B			None Detected
KA09A	East Building Debris Pile Weathered Roof Flashing-Black	Black/Silver Fibrous Homogeneous	**5% Chrysotile**
KA10A	East Building Debris Pile Roof Paper	Black Non-Fibrous Homogeneous	None Detected
KA11A-Floor Tile	East Building Debris Pile Crumbled 12x12 White Marble Floor Tile	White Non-Fibrous Homogeneous	None Detected
KA11A-Mastic		Yellow Non-Fibrous Homogeneous	None Detected
KA11B-Floor Tile		White Non-Fibrous Homogeneous	None Detected
KA11B-Mastic		Yellow Non-Fibrous Homogeneous	None Detected
KA11C-Floor Tile		White Non-Fibrous Homogeneous	None Detected
KA11C-Mastic		Yellow Non-Fibrous Homogeneous	None Detected

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Asbestos Analytical Results
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KERAMIDA Project No. 15780

Sample	Description	Appearance	Asbestos % Type
KA12A-Finish Coat	East Building Debris Pile Plaster	White Non-Fibrous Homogeneous	None Detected
KA12A-Base Coat		Gray Non-Fibrous Homogeneous	<1% Chrysotile
KA12B		Gray Non-Fibrous Homogeneous	<1% Chrysotile
KA12C-Finish Coat		White Non-Fibrous Homogeneous	None Detected
KA12C-Base Coat		Gray Non-Fibrous Homogeneous	None Detected
KA13A	Middle of East Building Debris Pile Crumbled Black Floor Tile	Black Non-Fibrous Homogeneous	**4% Chrysotile**
KA14A-Floor Tile	Middle of East Building Debris Pile Crumbled Gray w/Pink 9x9 Floor Tile	Gray Non-Fibrous Homogeneous	**3% Chrysotile**
KA14A-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA14B-Floor Tile		Gray Non-Fibrous Homogeneous	**4% Chrysotile**
KA14B-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA15A-Floor Tile	Middle of East Building Debris Pile Crumbled Greenish Gray 12x12 Floor Tile	Beige Non-Fibrous Homogeneous	**2% Chrysotile**
KA15A-Mastic		Black Non-Fibrous Homogeneous	<1% Chrysotile
KA15B-Floor Tile		Beige Non-Fibrous Homogeneous	**2% Chrysotile**
KA15B-Mastic		Black Non-Fibrous Homogeneous	<1% Chrysotile
KA15C-Floor Tile		Beige Non-Fibrous Homogeneous	**3% Chrysotile**
KA15C-Mastic			Insufficient Material
KA16A	S. of Junction Box, East Building Debris Pile Misc Material	Brown Fibrous Homogeneous	None Detected
KA16B			None Detected
KA16C			None Detected
KA17A	S. of Junction Box , East Building Debris Pile Ceiling Tile	Brown/White Fibrous Homogeneous	None Detected
KA17B			None Detected
KA18A	East Building Debris Pile Red Wire	Gray/Red/Black Fibrous Hetergeneous	None Detected
KA19A	East Building Debris Pile Black Wire	Gray/Black Fibrous Heterogeneous	None Detected
KA20A	East Building Debris Pile Gray Wire	Gray/Black Fibrous Heterogeneous	None Detected
KA21A	East Building Debris Pile Green Wire	Green Fibrous Homogeneous	None Detected
KA22A	West end of East Building Debris Pile Pipe Insulation	Gray/Green Fibrous Hetergeneous	**20% Chrysotile**
KA22B		Gray/Black Fibrous Homogeneous	**30% Chrysotile**
KA22C			**30% Chrysotile**
KA23A	West end of East Building Debris Pile Gasket - Crawl Space	Gray/Black Fibrous Homogeneous	None Detected
KA24A	East Building Debris Pile Weathered Roofing Brick Mastic	Black Fibrous Homogeneous	**20% Chrysotile**

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Sample	Description	Appearance	Asbestos % Type
KA25A	East Building Debris Pile Roofing Misc.	Black Non-Fibrous Homogeneous	None Detected
KA26A	South side of West Building Debris Pile Weathered Misc. Insulation	Gray Fibrous Homogeneous	**40% Chrysotile**
KA26B			**40% Chrysotile**
KA26C			**45% Chrysotile**
KA27A	West Building - west side of Debris Pile Crumbled Cement Wall Material	Gray Fibrous Homogeneous	**20% Chrysotile**
KA27B		Gray Non-Fibrous Homogeneous	**20% Chrysotile**
KA28A-Floor Tile	West Building Debris Pile Crumbled Red Brick Floor Tile	Red Non-Fibrous Homogeneous	**3% Chrysotile**
KA28A-Mastic		Black Non-Fibrous Homogeneous	**3% Chrysotile**
KA29A	West Building Debris Pile Weathered Roofing	Black Fibrous Homogeneous	None Detected
KA29B		Black Fibrous Heterogeneous	**10% Chrysotile**
KA29C			None Detected
KA30A-Floor Tile	South side of West Building Debris Pile Crumbled 9x9 Teal Floor Tile	Blue Non-Fibrous Homogeneous	None Detected
KA30A-Mastic		Tan Non-Fibrous Homogeneous	None Detected
KA30B-Floor Tile		Blue Non-Fibrous Homogeneous	None Detected
KA30B-Mastic		Tan Non-Fibrous Homogeneous	None Detected
KA30C-Floor Tile		Blue Non-Fibrous Homogeneous	None Detected
KA30C-Mastic		Tan Non-Fibrous Homogeneous	None Detected
KA31A	East wall of West Building Debris Pile Duct Tape Wrap	Gray Fibrous Homogeneous	**60% Chrysotile**
KA32A-Floor Tile	South side of West Building Debris Pile Crumbled 9x9 Green Floor Tile	Gray Non-Fibrous Homogeneous	None Detected
KA32A-Mastic		Tan Non-Fibrous Homogeneous	None Detected
KA32B-Floor Tile		Gray Non-Fibrous Homogeneous	None Detected
KA32B-Mastic		Tan Non-Fibrous Homogeneous	None Detected
KA32C-Floor Tile		Gray Non-Fibrous Homogeneous	None Detected
KA32C-Mastic		Tan Non-Fibrous Homogeneous	None Detected
KA33A-Linoleum	South of Main Debris Pile Crumbled Vinyl Flooring	Brown/Tan Fibrous Heterogeneous	**20% Chrysotile**
KA33A-Mastic		Black Non-Fibrous Homogeneous	**2% Chrysotile**
KA33B-Linoleum		Tan Fibrous Homogeneous	**20% Chrysotile**
KA33B-Mastic		Black Non-Fibrous Homogeneous	**2% Chrysotile**
KA33C-Linoleum		Tan Fibrous Homogeneous	**20% Chrysotile**
KA33C-Mastic		Black Non-Fibrous Homogeneous	**2% Chrysotile**
KA34A-Floor Tile	South of Main Debris Pile Crumbled 12x12 Light Brown Floor Tile	Brown Non-Fibrous Homogeneous	None Detected
KA34A-Mastic		Black Non-Fibrous Homogeneous	**2% Chrysotile**
KA34B-Floor Tile		Brown Non-Fibrous Homogeneous	None Detected
KA34B-Mastic		Black Non-Fibrous Homogeneous	**2% Chrysotile**
KA34C-Floor Tile		Brown Non-Fibrous Homogeneous	None Detected
KA34C-Mastic		Black Non-Fibrous Homogeneous	**2% Chrysotile**

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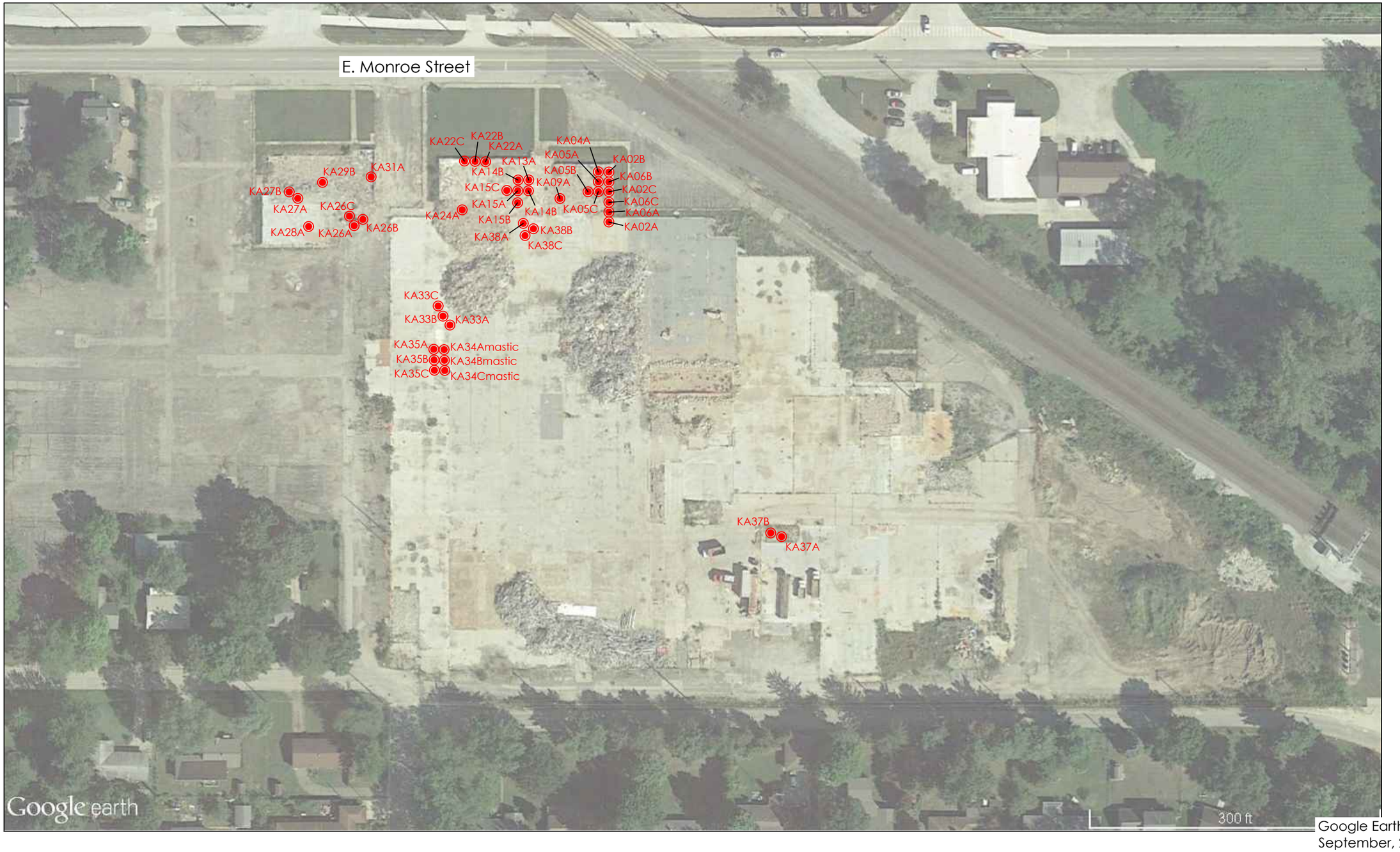
Asbestos Analytical Results
Sampled February 1, 2016
TOCON Property
Goshen, Indiana
KERAMIDA Project No. 15780

Sample	Description	Appearance	Asbestos % Type
KA35A-Floor Tile	South of Main Debris Pile Crumbled 12x12 Gray/Brown Floor Tile	Gray Non-Fibrous Homogeneous	**2% Chrysotile**
KA35A-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA35B-Floor Tile		Gray Non-Fibrous Homogeneous	**2% Chrysotile**
KA35B-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA35C-Floor Tile		Gray Non-Fibrous Homogeneous	**2% Chrysotile**
KA35C-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA36A	South Debris Pile Misc. Roofing	Black Fibrous Heterogeneous	None Detected
KA37A	Below Ground Debris Pile of Center Building Misc. Insulation	Gray Fibrous Homogeneous	**70% Chrysotile**
KA37B			**70% Chrysotile**
KA38A-Floor Tile	South of East Building Debris Pile Crumbled White 9x9 Floor Tile	Gray Non-Fibrous Homogeneous	**2% Chrysotile**
KA38A-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA38B-Floor Tile		Gray Non-Fibrous Homogeneous	**2% Chrysotile**
KA38B-Mastic		Black Non-Fibrous Homogeneous	None Detected
KA38C-Floor Tile		Gray Non-Fibrous Homogeneous	**2% Chrysotile**
KA38C-Mastic		Black Non-Fibrous Homogeneous	None Detected

Total Number of Samples Collected and Analyzed	**115**
Total Number of Detected Asbestos Samples	**47**
Asbestos Samples as Percentage of Total Samples	**41%**



Google Earth Image Date
September, 2015

LEGEND
◉ Positive Asbestos Sample Location

SCALE:
0 50' 100'

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Project: Johnson Controls, Inc.
1302 East Monroe Street
Goshen, Indiana

	Drawn By: J. DuMond
Project Number: 15780	Approved By: JR
Date: February 3, 2016	File No. 15780_asbestos

Figure 1

Positive Asbestos Sample Locations

CONCLUSIONS

The sampling of the demolition debris piles present at the TOCON Property in Goshen, Indiana, by KERAMIDA, on February 1, 2016, has demonstrated that:

1. Of the 115 demolition debris samples collected by KERAMIDA at TOCON on February 1, 2016, and analyzed for asbestos, 47 contained asbestos (see Figure 1) classifying them as "Asbestos-Containing Material" (ACM), as per 326 IAC 14-10-2. In other words, 41% of the 115 demolition debris samples collected were asbestos.
2. The asbestos content of the samples was recorded by the laboratory as high as 70% Chrysotile.
3. The ACM in the demolition debris is "Regulated Asbestos-Containing Material" (RACM), based on the material type and current condition, as defined by 326 IAC 14-10.
4. Based on the results of this investigation, and given that all sampled debris piles contained asbestos, all the demolition debris piles currently present at the TOCON property, both aboveground and in subsurface cavities, should be treated as Asbestos-Containing Waste Material due to their containing of "Regulated Asbestos-Containing Materials", as per 326 IAC 14-10-4. The preponderance of the evidence in this case shows that all the debris piles contain similar, comingled demolition debris.
5. The demolition debris at the TOCON site which resulted from the demolition of buildings known to contain asbestos, and for which no documentation was ever provided by TOCON that the asbestos was removed, was believed by KERAMIDA to contain the asbestos that was never documented as removed. The results of the February 1, 2016 sampling of the debris piles currently remaining at the TOCON property confirmed KERAMIDA's position that the debris piles contain asbestos and should be treated as Asbestos-Containing Waste Material, in compliance with 326 IAC 14-10.
6. The debris piles currently present at the TOCON site, both above and below ground, should not be disturbed and should be managed as Asbestos-Containing Waste Material, according to applicable asbestos regulations, 326 IAC 14-10-4. The requirements of these regulations include, but are not limited to:
    - Adequately wet the Asbestos-Containing Waste Material at all times until properly disposed of;
    - Prominently display asbestos warning signs;
    - Employ security measures, including barriers, security guards (licensed Indiana worker) or other measures approved by IDEM to restrict access to unauthorized persons; and,
    - Upon completion of the cleanup, an Indiana licensed supervisor shall perform a final visual inspection of the work area prior to removal of warning signs, and issue a certificate, which shall be retained for 3 years.

ATTACHMENT 1

KERAMIDA Resumes and Asbestos Certifications

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JEFFREY P. RECHTIN, C.H.M.M.
PROJECT MANAGER, LAND SERVICES DIVISION

Mr. Rechtin has over 20 years of experience in the environmental consulting service and has performed numerous Phase I and Phase II Environmental Assessments that included additional lead and asbestos surveys, asbestos abatement, and mold sampling. In addition to his due diligence assessments, Mr. Rechtin has performed and managed compliance audits, underground storage tank management and closure for commercial and industrial clients. His technical specialties include developing sample plans and procedures for collecting samples of volatile organic compounds, dust, oil mists, carbon monoxide, and carbon dioxide. His asbestos project specialties include work plan development, project and task coordination, cost estimation and budgeting, and data evaluation.

Mr. Rechtin has over 20 years of experience in asbestos inspections, project design, in monitoring and coordinating safety programs, including safety inspections and safety training. He has developed and taught safety training programs to broaden clients' knowledge on the recognition, avoidance, and prevention of safety and health hazards in their facilities as well as to maintain their safety certifications.

Mr. Rechtin has a B.S. in Environmental Engineering Technology from the University of Dayton. He is a Certified Hazardous Materials Manager and holds numerous asbestos licenses in various states.

Certifications
Licensed Asbestos Inspector in Indiana
Licensed Asbestos Project Designer in Indiana
Licensed Illinois Asbestos Professional
Licensed Indiana Asbestos Worker License
Licensed Lead Risk Assessor in Indiana
Licensed Michigan Asbestos Inspector
Certified Ohio Asbestos Hazard Evaluation Specialist

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STEVE COBB
ASSISTANT VICE PRESIDENT

Mr. Cobb is an Assistant Vice President at KERAMIDA and has managed and performed field activities on hundreds of projects involving asbestos surveys and abatement oversight, hazardous waste removals, site investigations, remediation, UST management, and site assessments. Mr. Cobb has managed projects in accordance with a variety of regulatory programs including Superfund, LUST, VRP, Brownfields, and RISC. He has extensive experience as the on-site project manager on multi-million dollar complex environmental projects, including those in the Superfund program, and many redevelopment projects. Examples include a $3 million project in Arkansas and a $5 million Superfund project in Indiana. In addition, Mr. Cobb has worked on building decommission projects leading to the successful redevelopment of sites. Mr. Cobb has extensive experience in the management of environmental construction projects including negotiations with regulatory agencies, specification development, bidding and oversight. Larger sites have ranged from complex former dry cleaners to large commercial facilities and industrial areas.

Mr. Cobb is KERAMIDA's program manager for Simon Property Group at their facilities located throughout the US, which includes over 400 locations at both their malls and lifestyle centers. Services provided include: asbestos inspections and abatement oversight, due diligence, site investigations, remediation, and indoor air quality evaluations. Their environmental needs are market driven and therefore require timely responses and addressing their needs immediately. Mr. Cobb works closely with the client to minimize potential delays that could be caused by environmental concerns.

Mr. Cobb holds a Bachelor of Science degree in Environmental Management from Indiana University and a Master of Business Administration degree from the University of Indianapolis. He holds the following certifications: Health and Safety Training - OSHA 29 CFR Part 1910 and 1926.

Certifications
Licensed Indiana Asbestos Project Designer
HAZWOPER Certification

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JOSEPH (TY) GIDDENS
PROJECT MANAGER, COMPLIANCE DIVISION

Mr. Giddens has a background in the regulatory compliance fields of environmental, health and safety in industry, government and academia settings. He is responsible for managing and providing support on environmental compliance projects, including but not limited to annual reporting, stormwater, spill plans, compliance assessments, on-site monitoring and inspections, field sampling, and environmental audits. Mr. Giddens provided assistance in both field and office applications of EPA CFR promulgated stack testing methods.

Mr. Giddens' experience also includes Clean Air Act (CAA) compliance, Toxic Substances Control Act (TSCA) compliance, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) compliance, Superfund Amendments and Reauthorizations Act (SARA), Tier II reporting, Toxic Release Inventory (TRI) reporting, Department of Transportation (DOT) Hazardous Materials Regulations (HMR) compliance, Radiation Safety, Retail Food Establishment Sanitation, asbestos, and lead-based paint.

Mr. Giddens holds a B.A. in Environmental Management from Indiana University. He is a Licensed Indiana Asbestos Inspector with over 100 pre-demolition asbestos inspections and he has completed over 100 Phase I Environmental Site Assessments. In addition, he is certified in OSHA HAZWOPER and Visible Emissions.

CERTIFICATIONS
Licensed Asbestos Inspector in Indiana
HAZWOPER Certification
USEPA Visible Emissions Certification

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VICKY KERAMIDA, Ph.D.
CEO & CHIEF TECHNICAL OFFICER
Exp.: 31 yrs.

Dr. Keramida is the CEO, Chief Technical Officer and founder of KERAMIDA Inc., an engineering and consulting company. The firm was established in 1988 and serves industries, businesses, cities, and governments worldwide with strategy and implementation services in: Sustainability, Green House Gases, Energy, Environmental Compliance, Remediation, Due Diligence, Brownfields Redevelopment, Plant Decommissioning, Health & Safety, Training, Risk Management, and ISO Management Systems. Dr. Keramida holds M.S. and Ph.D. degrees in Environmental Engineering from Purdue University and a B.S. in Sciences also from Purdue. She is a nationally recognized expert in remediation, waste and wastewater management, water quality, and sustainability strategies. She is the author of manuals and technical textbooks, holds a patent on hazardous waste treatment and reuse, and has published and presented over 200 technical papers. Dr. Keramida serves as Board Member and Chairman of the Board of numerous industrial and civic organizations, as well as governmental agencies and universities. She has served as an expert witness in many cases involving complex source and cause of contamination issues, vapor intrusion issues, investigation/remediation issues, water quality, wastewater treatment, fish kills, and toxicology and the impacts of chemicals on human health. Dr. Keramida has received many awards for technical excellence and business leadership, including Purdue University's Civil Engineering Distinguished Alumni Achievement Award, and American Foundry Society's Life Achievement Award. She is a member of the KERAMIDA Litigation Experts Group.

Dr. Keramida has played a lead role in conceiving and developing KERAMIDA's Sustainability Model Program for Cities, including Sustainability Metrics for Capital Projects and Rebirth of City Economies through Rivers. Dr. Keramida has, furthermore, developed the Profitable Urban Farming and EcoCrossroads Initiative. She has played a lead role in municipal planning projects, including Successful Integration of Industries into Cities, Brownfields Redevelopment for Neighborhood Revitalization, the creation through legislation of a Taxing Authority responsible for cleaning up a Superfund Site, Reuse of Superfund Sites, Sustainable Development of Parks on Remediated Superfund Sites, Regional Water Quality Planning, and Regional Water Resources Management.

In the industrial arena, Dr. Keramida is leading KERAMIDA's GreenSTEP™ Sustainability Initiative, a planning process and metrics rating system for Sustainable businesses and industry. The software-based GreenSTEP™ incorporates market sector-specific metrics developed by KERAMIDA.

In 2000, Dr. Keramida founded a Sustainability research and development company in California, TECHNIKON, LLC, and privatized a U.S. Department of Defense 5-year old green manufacturing research program. TECHNIKON, whose major clients included the U.S. DoD and the U.S. car manufacturers, focused its sustainability research on green manufacturing to eliminate air pollution and wastes, as well as on validation of Biomass-to-Energy processes, and became a not-for-profit institute in 2011.

ATTACHMENT 2

Photos of Demolition Debris Piles

KERAMIDA
ENGINEERS • SCIENTISTS • PLANNERS
GLOBAL EHS & SUSTAINABILITY SERVICES

Site Photographs

	Photo Date:	Project:	Project #
	January 29, 2016 & February 1, 2016	Asbestos Inspection, TOCON Property	15780

Photo #1

General view of debris pile on east building

Photo #2

General view of "air pocket" revealing basement under debris pile on east building

KERAMIDA
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GLOBAL EHS & SUSTAINABILITY SERVICES

Site Photographs

	Photo Date:	Project:	Project #
	January 29, 2016 & February 1, 2016	Asbestos Inspection, TOCON Property	15780

Photo #3 General view of debris on west building	

ATTACHMENT 3

KERAMIDA Standard Operating Procedures

KERAMIDA
ENGINEERS • SCIENTISTS • PLANNERS
GLOBAL EHS & SUSTAINABILITY SERVICES

KERAMIDA INC. STANDARD OPERATING PROCEDURE
ASBESTOS INSPECTIONS AND SAMPLING

1. Confirm the building areas to be inspected in accordance with the project-specific scope of work, and mark the designated building areas on Site Diagram (Building Diagram).

2. **"Meeting Upon Arrival"** - contact Site Contact upon arrival to confirm specifics of inspection/sampling. Assure inspection/sampling areas are marked correctly and are accessible. Confirm all areas to be inspected (as shown on Figure of Inspected Areas in Item #1) with Site Contact.

3. Create a hand drawn figure for each building to be inspected. Identify as "Figure _____: Inspected Building/Area # _____". Place approximate dimensions of Building/Area on Figure. **Mark all sampling locations on Figure in the field, with measurements to identifiable building points, if necessary**

4. Wet down the sample areas with amended water. Collect samples using gloved hands. Change gloves between sample locations. Place sample directly in designated sample container (resealable zip top bag), and label bag with sample identification number and description (as detailed in Item #5 below). Patch the areas in friable materials disturbed by sampling in order to avoid the creation of new friable areas.

5. Sample identification number should include both building number/identification and specific sample identification number (e.g., Bldg. 1 – ASB1). On field log next to each sample number, identify the material being sampled (e.g., 12x12 floor tile, pipe wrap), which will later to correspond to a sampling table. Mark on Figure **ALL** structures that will **NOT** be renovated or removed, **if any**, based on information from Client and Client's response in "meeting upon arrival" (i.e., structures/areas that do not need to be sampled, **if any**).

6. Inspections are to be conducted according to "NESHAP Inspection for Renovation or for Demolition". All sampling will be destructive and for all layers, unless Client requests otherwise during the "meeting upon arrival" stated in Item 2 above.

ATTACHMENT 4

Laboratory Analytical Report and Chain of Custody

EMSL Analytical, Inc.

2001 East 52nd St. Indianapolis, IN 46205
Tel/Fax: (317) 803-2997 / (317) 803-3047
http://www.EMSL.com / indianapolislab@emsl.com

EMSL Order: 161601521
Customer ID: KERA50
Customer PO:
Project ID:

Attention: Jeff Rechtin
Keramida Environmental, Inc.
401 North College Avenue
Indianapolis, IN 46202

Project: JOHNSON CONTROLS / TOCON

Phone: (317) 685-6600
Fax: (317) 685-6610
Received Date: 02/02/2016 10:03 AM
Analysis Date: 02/02/2016
Collected Date: 02/01/2016

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
KA01A *161601521-0001*	bsmt e end e bldg	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA01B *161601521-0002*	bsmt e end e bldg	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA01C *161601521-0003*	bsmt e end e bldg	Brown/White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA02A-Floor Tile *161601521-0004*	e end e bldg	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
KA02A-Mastic *161601521-0004A*	e end e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA02B-Floor Tile *161601521-0005*	e end e bldg	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
KA02B-Mastic *161601521-0005A*	e end e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA02C-Floor Tile *161601521-0006*	e end e bldg	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
KA02C-Mastic *161601521-0006A*	e end e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA03A *161601521-0007*	bsmt	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA03B *161601521-0008*	bsmt	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA03C *161601521-0009*	bsmt	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA04A *161601521-0010*	e end e bldg	Gray Fibrous Homogeneous	70% Cellulose	10% Non-fibrous (Other)	20% Chrysotile
KA05A *161601521-0011*	bsmt	Brown/Gray Fibrous Homogeneous	45% Cellulose	30% Non-fibrous (Other)	25% Chrysotile
KA05B *161601521-0012*	e bldg	Gray Fibrous Homogeneous	50% Cellulose	20% Non-fibrous (Other)	30% Chrysotile
KA05C *161601521-0013*	e bldg	Gray Fibrous Homogeneous	50% Cellulose	20% Non-fibrous (Other)	30% Chrysotile

Report amended: 02/03/2016 11:59:57 Replaces initial report from: 02/02/2016 12:04:23 Reason Code: Client-Samples Added

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Customer ID: KERA50
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
KA06A-Floor Tile *161601521-0014*	e bldg	Beige Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
KA06A-Mastic *161601521-0014A*	e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA06B-Floor Tile *161601521-0015*	e bldg	Beige Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
KA06B-Mastic *161601521-0015A*	e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA06C-Floor Tile *161601521-0016*	e bldg	Gray Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
KA06C-Mastic *161601521-0016A*	e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA07A-Floor Tile *161601521-0017*	e bldg	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA07A-Mastic *161601521-0017A*	e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA08A *161601521-0018*	e bldg	White/Blue Non-Fibrous Homogeneous	5% Cellulose 5% Glass	90% Non-fibrous (Other)	None Detected
KA08B *161601521-0019*	e bldg	White/Blue Non-Fibrous Homogeneous	5% Cellulose 5% Glass	90% Non-fibrous (Other)	None Detected
KA09A *161601521-0020*	e bldg	Black/Silver Fibrous Homogeneous	20% Cellulose 15% Glass	60% Non-fibrous (Other)	5% Chrysotile
KA10A *161601521-0021*	e bldg	Black Non-Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
KA11A-Floor Tile *161601521-0022*	e bldg	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA11A-Mastic *161601521-0022A*	e bldg	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA11B-Floor Tile *161601521-0023*	e bldg	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA11B-Mastic *161601521-0023A*	e bldg	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA11C-Floor Tile *161601521-0024*	e bldg	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA11C-Mastic *161601521-0024A*	e bldg	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA12A-Finish Coat *161601521-0025*	e bldg	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
KA12A-Base Coat *161601521-0025A* *The sample group is not homogeneous*	e bldg	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	<1% Chrysotile
KA12B *161601521-0026* *The sample group is not homogeneous*	e bldg	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	<1% Chrysotile
KA12C-Finish Coat *161601521-0027*	e bldg	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA12C-Base Coat *161601521-0027A* *The sample group is not homogeneous*	e bldg	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
KA13A *161601521-0028*	mid of e bldg	Black Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
KA14A-Floor Tile *161601521-0029*	mid of e bldg	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
KA14A-Mastic *161601521-0029A*	mid of e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA14B-Floor Tile *161601521-0030*	mid of e bldg	Gray Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
KA14B-Mastic *161601521-0030A*	mid of e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA15A-Floor Tile *161601521-0031*	mid of e bldg	Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA15A-Mastic *161601521-0031A*	mid of e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
KA15B-Floor Tile *161601521-0032*	mid of e bldg	Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA15B-Mastic *161601521-0032A*	mid of e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
KA15C-Floor Tile *161601521-0033*	mid of e bldg	Beige Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
KA15C-Mastic *161601521-0033A*	mid of e bldg				Insufficient Material
KA16A *161601521-0034*	s junc box e bldg	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA16B *161601521-0035*	s junc box e bldg	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA16C *161601521-0036*	s junc box e bldg	Brown Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
KA17A *161601521-0037*	s junc box e bldg	Brown/White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA17B *161601521-0038*	s junc box e bldg	Brown/White Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
KA18A *161601521-0039*	s junc box e bldg	Gray/Red/Black Fibrous Heterogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
KA19A *161601521-0040*	e bldg	Gray/Black Fibrous Heterogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
KA20A *161601521-0041*	e bldg	Gray/Black Fibrous Heterogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
KA21A *161601521-0042*	e bldg	Green Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
KA22A *161601521-0043*	w end e bldg	Gray/Green Fibrous Heterogeneous	20% Cellulose	60% Non-fibrous (Other)	20% Chrysotile
KA22B *161601521-0044*	w end e bldg	Gray/Black Fibrous Homogeneous	30% Cellulose	40% Non-fibrous (Other)	30% Chrysotile
KA22C *161601521-0045*	w end e bldg	Gray/Black Fibrous Homogeneous	30% Cellulose	40% Non-fibrous (Other)	30% Chrysotile
KA23A *161601521-0046*	w end e bldg	Gray/Black Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
KA24A *161601521-0047*	e bldg	Black Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
KA25A *161601521-0048*	e bldg	Black Non-Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
KA26A *161601521-0049*	w bldg s side	Gray Fibrous Homogeneous		60% Non-fibrous (Other)	40% Chrysotile
KA26B *161601521-0050*	w bldg s side	Gray Fibrous Homogeneous		60% Non-fibrous (Other)	40% Chrysotile
KA26C *161601521-0051*	w bldg s side	Gray Fibrous Homogeneous		55% Non-fibrous (Other)	45% Chrysotile
KA27A *161601521-0052*	w side w bldg	Gray Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
KA27B *161601521-0053*	w side w bldg	Gray Non-Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
KA28A-Floor Tile *161601521-0054*	w bldg	Red Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
KA28A-Mastic *161601521-0054A*	w bldg	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
KA29A *161601521-0055* *The sample group is not homogeneous*	w bldg	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
KA29B *161601521-0056* *The sample group is not homogeneous*	w bldg	Black Fibrous Heterogeneous	15% Cellulose 5% Glass	70% Non-fibrous (Other)	10% Chrysotile
KA29C *161601521-0057* *The sample group is not homogeneous*	w bdg	Black Fibrous Heterogeneous	20% Cellulose 10% Glass	70% Non-fibrous (Other)	None Detected
KA30A-Floor Tile *161601521-0058*	w bldg s side	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA30A-Mastic *161601521-0058A*	w bldg s side	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA30B-Floor Tile *161601521-0059*	w bldg s side	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA30B-Mastic *161601521-0059A* *Inseparable paint / coating layer included in analysis*	w bldg s side	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA30C-Floor Tile *161601521-0060*	w bldg s side	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA30C-Mastic *161601521-0060A*	w bldg s side	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA31A *161601521-0061*	w bldg e wall	Gray Fibrous Homogeneous	10% Cellulose	30% Non-fibrous (Other)	60% Chrysotile
KA32A-Floor Tile *161601521-0062*	w bldg s side	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA32A-Mastic *161601521-0062A*	w bldg s side	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA32B-Floor Tile *161601521-0063*	w bldg s side	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA32B-Mastic *161601521-0063A* *Inseparable paint / coating layer included in analysis*	w bldg s side	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA32C-Floor Tile *161601521-0064*	w bldg s side	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA32C-Mastic *161601521-0064A*	w bldg s side	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA33A-Linoleum *161601521-0065*	s main debris pile	Brown/Tan Fibrous Heterogeneous		80% Non-fibrous (Other)	20% Chrysotile
KA33A-Mastic *161601521-0065A*	s main debris pile	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
KA33B-Linoleum *161601521-0066*	s main debris pile	Tan Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
KA33B-Mastic *161601521-0066A*	s main debris pile	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA33C-Linoleum *161601521-0067*	s main debris pile	Tan Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
KA33C-Mastic *161601521-0067A*	s main debris pile	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA34A-Floor Tile *161601521-0068*	s main debris pile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA34A-Mastic *161601521-0068A*	s main debris pile	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA34B-Floor Tile *161601521-0069*	s main debris pile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA34B-Mastic *161601521-0069A*	s main debris pile	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA34C-Floor Tile *161601521-0070*	s main debris pile	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA34C-Mastic *161601521-0070A*	s main debris pile	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA35A-Floor Tile *161601521-0071*	s main debris pile	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA35A-Mastic *161601521-0071A*	s main debris pile	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA35B-Floor Tile *161601521-0072*	s main debris pile	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA35B-Mastic *161601521-0072A*	s main debris pile	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA35C-Floor Tile *161601521-0073*	s main debris pile	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA35C-Mastic *161601521-0073A*	s main debris pile	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA36A *161601521-0074*	s debris pile	Black Fibrous Heterogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
KA37A *161601521-0075*	ctr bldg bsmt	Gray Fibrous Homogeneous	20% Cellulose	10% Non-fibrous (Other)	70% Chrysotile
KA37B *161601521-0076*	ctr bldg bsmt	Gray Fibrous Homogeneous	25% Cellulose	5% Non-fibrous (Other)	70% Chrysotile

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
KA38A-Floor Tile *161601521-0077*	s of e bldg	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA38A-Mastic *161601521-0077A*	s of e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA38B-Floor Tile *161601521-0078*	s of e bldg	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA38B-Mastic *161601521-0078A*	s of e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
KA38C-Floor Tile *161601521-0079*	s of e bldg	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
KA38C-Mastic *161601521-0079A*	s of e bldg	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)

Clinton Mcgill (5)
Craig Nixon (29)
Hannah Mills (19)
Jadda Moffett (13)
Melissa Newkirk (31)
Ross Matlock (17)

Richard Harding, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262

Report amended: 02/03/2016 11:59:57 Replaces initial report from: 02/02/2016 12:04:23 Reason Code: Client-Samples Added

OrderID: 161601521

EMSL Analytical, Inc.
2001 East 52nd Street

Indianapolis, IN 46205
PHONE: (317) 803-2997
FAX: (317) 803-3047

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only).*

161601521

Company : KERAMIDA, Inc.	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 401 North College Ave.	
City: Indianapolis **State/Province:** IN	**Zip/Postal Code:** 46202 **Country:** United States
Report To (Name): Jeff Rechtin	**Telephone #:** 317-685-6600
Email Address: jrechtin@keramida.com	**Fax #:** **Purchase Order:**
Project Name/Number: Johnson Controls / Tocon	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: IN	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☒ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT You will be asked to sign an authonzation form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM – Bulk
☒ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5 2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

☑ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 2/1/16

Samplers Name: Ty Giddens **Samplers Signature:** Ty Giddens

Sample #	HA #	Sample Location	Material Description
KA-01	A-C	Basement - East end of East Bldg	1X1 Ceiling/wall tile
KA-02	A-C	East end East Bldg	9x9 Black Floor tile
KA-03	A-C	Basement	Pipe insulation
KA-04	A	East End of East Bldg	Insulation Debris
KA-05	A-C	Basement	Duct Insulation
KA-06	A-C	East Bldg	9x9 Gray Floor tile
KA-07	A	East Bldg	12x12 Cream Floor tile
KA-08	A-B	East Bldg	Blue Sheet Flooring
KA-09	A	East Bldg	Roof Flashing - Black
KA-10	A	East Bldg	Roof Paper

Client Sample # (s): KA-01 - KA-38 **Total # of Samples:** 79

Relinquished (Client): **Date:** 2/2/16 **Time:** 1003

Received (Lab): S Brown **Date:** 2/2/16 **Time:** 1003

Comments/Special Instructions:
Each Line is Separate HA.

EMSL Analytical, Inc.
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FAX: (317) 803-3047

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Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 1521

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
KA-11	A-C	East Bldg	12x12 white marble Floor tile
KA-12	A-C	East Bldg	Plaster
KA-13	A	middle of East Bldg	Black Floor tile
KA-14	A-B	middle of East Bldg	Gray w/Pink 9x9 Floor tile
KA-15	A-C	middle of East Bldg	Greenish Gray 12x12 Floor tile
KA-16	A-C	South of Junction Box, East Bldg	Misc material
KA-17	A-B	South of Junction Box, East Bldg	Ceiling tile
KA-18	A	East Bldg	Red Wire
KA-19	A	East Bldg	Black wire
KA-20	A	East Bldg	Gray wire
KA-21	A	East Bldg	Green wire
KA-22	A-C	West End of East Bldg	Pipe insulation
KA-23	A	West End of East Bldg	GASKET - Crawl space
KA-24	A	East Bldg	Roofing Brick mastic
KA-25	A	East Bldg	Roofing Misc.
KA-26	A-C	West Bldg - south side	weathered Misc insulation
KA-27	A-B	west side - west Bldg.	Cement wall material
KA-28	A	West Bldg	Red Brick Floor tile
KA-29	A-C	West Bldg	Roofing
KA-30	A-C	West Bldg - south side	9x9 Teal Floor tile
KA-31	A	West Bldg - East wall	Duct Tape wrap
KA-32	A-C	West Bldg - south side	9x9 green Floor tile
KA-33	A-C	South of main debris pile	Vinyl Flooring
KA-34	A-C	South of main debris pile	12x12 Light Brown Floor tile

*Comments/Special Instructions:

Page 2 of 3 pages

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Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 1521

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
KA-35	A-C	~~South Debris pile~~ ER south of main pile	12X12 Gray/Brown Floor tile
KA-36	A	South Debris pile	Misc. Roofing
KA-37	A-B	Center Bldg ~~AT~~ Basement	Misc. Insulation
KA-38	A-C	South of east Bldg	White 9x9 Floor tile

***Comments/Special Instructions:**

Page 3 of 3 pages

ATTACHMENT 5

326 IAC Article 14. *Emission Standards for Hazardous Air Pollutants – Rule 10. Emission Standards for Asbestos; Demolition and Renovation Operations* (see pgs. 11-22 of Attachment 5 for Rule 10, 326 IAC 14-10)

ARTICLE 14. EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

NOTE: IC 13-1 and IC 13-7 were repealed by P.L.1-1996, SECTION 99, effective July 1, 1996.

Rule 1. General Provisions

326 IAC 14-1-1 Applicability

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 1. (a) This article applies to the owner or operator of any stationary source for which a standard is prescribed under this article.

(b) The board adopts by reference and incorporates 40 CFR 61, Subpart A, General Provisions* concerning emission standards for hazardous air pollutants, with the exception of:

(1) 40 CFR 61.04 Address*;
(2) 40 CFR 61.11(f) Administrator's Authority on Waiver of Compliance*;
(3) 40 CFR 61.12(d) Alternative Means of Emission Limitation*;
(4) 40 CFR 61.16 Availability of Information*; and
(5) 40 CFR 61.17 State Authority*;

and as modified in section 2 of this rule. Provisions of waiver of compliance in 40 CFR 61 Section 61.11, Subpart A*, shall not apply to sources subject to the requirements established in 326 IAC 14-9.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-1-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2562; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3011; errata, 11 IR 3047; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 81)*

326 IAC 14-1-2 Definitions

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 2. (a) Except as provided in subsection (b), for the purposes of this article, the definitions, abbreviations, and units listed in 40 CFR 61.02* and 40 CFR 61.03*, shall apply.

(b) For the purposes of this article, the following substitutions shall be made for terms used in the portions of 40 CFR 61* adopted by reference:

(1) "Administrator" means the commissioner of the department of environmental management.
(2) "U.S. Environmental Protection Agency" or "U.S. EPA" means the department of environmental management.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-1-2; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2562; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3011; errata, 11 IR 3047; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 81)*

326 IAC 14-1-3 More stringent limitations apply

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11; IC 13-17-3-12
Affected: IC 13-15; IC 13-17

Sec. 3. If emission limitations contained in this article conflict with or are inconsistent with any other emission limitations established by this title, then the more stringent limit shall apply. *(Air Pollution Control Division; 326 IAC 14-1-3; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2562; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3011; errata, 11 IR 3047; filed Apr 22, 1997, 2:00 p.m.: 20 IR*

2372; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Dec 20, 2001, 4:30 p.m.: 25 IR 1604)

326 IAC 14-1-4 Federal regulations (Repealed)

Sec. 4. *(Repealed by Air Pollution Control Division; filed Aug 26, 2004, 11:30 a.m.: 28 IR 114)*

Rule 2. Emission Standards for Sources of Asbestos Listed in Section 1 of this Rule

326 IAC 14-2-1 Applicability; incorporation by reference of federal standards

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) The provisions of this rule shall apply to the following sources:
(1) Asbestos mills.
(2) Surfacing of roadways with asbestos-containing materials.
(3) Manufacturing operations using commercial asbestos.
(4) Spray-on application of materials containing asbestos.
(5) Fabricating operations using commercial asbestos.
(6) Insulating materials that contain commercial asbestos.
(7) Waste disposal for asbestos mills.
(8) Waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations.
(9) Inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations.
(10) Air cleaning.
(11) Reporting.
(12) Active waste disposal sites.
(13) Operations that convert asbestos-containing waste material into nonasbestos (asbestos-free) material.
(b) The board hereby adopts by reference and incorporates herein 40 CFR 61, Subpart M, Emission Standard for Asbestos*.
*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-2-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2563; filed Dec 5, 1990, 3:40 p.m.: 14 IR 607; filed Mar 28, 1995, 2:00 p.m.: 18 IR 2011; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed May 21, 2002, 10:20 a.m.: 25 IR 3084)*

Rule 3. Emission Standard for Beryllium

326 IAC 14-3-1 Applicability; incorporation by reference of federal standards

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 1. (a) This rule applies to the following stationary sources:
(1) Extraction plants, ceramic plants, foundries, incinerators, and propellant plants that process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste.
(2) Machine shops that process beryllium, beryllium oxides, or any alloy when such alloy contains more than five percent (5%) beryllium by weight.
(b) The board hereby adopts by reference and incorporates herein 40 CFR 61, Subpart C, Emission Standard for Beryllium*.
*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-3-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2563; readopted filed Jan*

10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1570; filed Aug 26, 2004, 11:30 a.m.: 28 IR 82)

Rule 4. Emission Standard for Beryllium Rocket Motor Firing

326 IAC 14-4-1 Applicability; incorporation by reference of federal standards

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 1. (a) This rule applies to rocket motor test sites.

(b) The board hereby adopts by reference and incorporates herein 40 CFR 61, Subpart D, Emission Standard for Beryllium Rocket Motor Firing*.

*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-4-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2563; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 82)*

Rule 5. Emission Standard for Mercury

326 IAC 14-5-1 Applicability; incorporation by reference of federal standards

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 1. (a) This rule applies to those stationary sources that process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge.

(b) The board hereby adopts by reference and incorporates herein 40 CFR 61, Subpart E, Emission Standard for Mercury*.

*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-5-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2563; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 82)*

Rule 6. Emission Standard for Vinyl Chloride

326 IAC 14-6-1 Applicability; incorporation by reference of federal standards

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 1. (a) This rule (326 IAC 14-6) shall apply to plants, as defined in 40 CFR 61, Subpart F, which produce:

(1) ethylene dichloride by reaction of oxygen and hydrogen chloride with ethylene;

(2) vinyl chloride by any process; and/or

(3) one (1) or more polymers containing any fraction of polymerized vinyl chloride.

(b) The board hereby adopts by reference and incorporates herein 40 CFR 61, Subpart F, Emission Standard for Vinyl Chloride.

Copies of the Code of Federal Regulations (CFR) may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or from the Indiana Department of Environmental Management, Office of Air Quality, 100 North Senate, Indiana Government Center-North, Tenth Floor, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-6-1; filed Mar 10, 1988, 1:20 pm: 11 IR 2563; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571)*

Rule 7. Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene

326 IAC 14-7-1 Applicability; incorporation by reference of federal standards

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 1. (a) This rule applies to each of the following sources that are intended to operate in benzene service:

(1) Pumps.
(2) Compressors.
(3) Pressure relief devices.
(4) Sampling connections.
(5) Systems.
(6) Open-ended valves or lines.
(7) Valves.
(8) Flanges and other connectors.
(9) Product accumulator vessels.
(10) Control devices or systems required by this rule.

(b) The board hereby adopts by reference and incorporates herein 40 CFR 61, Subpart J, Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene*.

*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-7-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2564; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 83)*

Rule 8. Emission Standard for Equipment Leaks (Fugitive Emission Sources)

326 IAC 14-8-1 Applicability

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 1. (a) This rule applies to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service:

(1) Pumps.
(2) Compressors.
(3) Pressure relief devices.
(4) Sampling connection systems.
(5) Open-ended valves or lines.
(6) Valves.
(7) Flanges and other connectors.
(8) Product accumulator vessels.
(9) Control devices or systems required by this rule.

(b) The board adopts by reference and incorporates 40 CFR 61, Subpart V, Emission Standard for Equipment Leaks (Fugitive Emission Sources)*, with the exception of revisions to 40 CFR 61.241*, 61.245*, 61.246*, and 61.247* as specified in sections 2 through 5 of this rule.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-8-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2564; filed Apr 13, 1988,*

3:30 p.m.: 11 IR 3012; errata, 11 IR 3047; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 83)

326 IAC 14-8-2 Definitions

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 2. (a) For the purposes of this rule (326 IAC 14-8), the definitions, except for those defined in this section, listed in 40 CFR 61, Subpart V, Section 61.241 shall apply.

"Repaired" means that equipment is adjusted, or otherwise altered, to eliminate a leak as indicated by one of the following: an instrument reading of ten thousand (10,000) ppm or greater, detectable emissions as indicated by an instrument reading of five hundred (500) ppm or greater above a background concentration, indication of liquids dripping, or indication by a sensor that a seal system or barrier fluid system has failed.

"Stuffing box pressure" means the fluid (liquid or gas) pressure inside the casing or housing of a piece of equipment, on the process side of the inboard seal. *(Air Pollution Control Division; 326 IAC 14-8-2; filed Apr 13, 1988, 3:30 pm: 11 IR 3012; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)*

326 IAC 14-8-3 Test methods and procedures

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 3. (a) For the purposes of this rule, the introductory paragraph of 40 CFR 61.245(b)*, Test Methods and Procedures, shall read, "Monitoring, as required in 40 CFR 61, Subpart V, Sections 61.242, 61.243, 61.244 and 326 IAC 14-9-5, shall comply with the following requirements:".

(b) For the purposes of this rule, the introductory paragraph of 40 CFR 61, Subpart V, Section 61.245(c)* shall read, "When equipment is tested for compliance with no detectable emissions, the test shall comply with the following requirements:".

(c) For the purposes of this rule, 40 CFR 61, Subpart V, Section 61.245(d)(3)* shall read, "Samples used in determining the percent VHAP content shall be representative, as determined by the commissioner, of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.".

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-8-3; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3012; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 83)*

326 IAC 14-8-4 Record keeping requirements

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 4. (a) For the purposes of this rule, introductory sentences in 40 CFR 61.246, Recordkeeping Requirements*, (b), (c), and (e), paragraphs (e)(2)(i), (e)(2)(ii), (e)(4)(i), and (h)(1) shall read as in subsections (b), (c), (d), (e), (f), (g), and (h) of this section, respectively.

(b) "When each leak is detected as specified in 40 CFR 61.242-2*, 61.242-3*, 61.242-7*, 61.242-8*, and 326 IAC 14-9-5, the following requirements apply:".

(c) "When each leak is detected as specified in 40 CFR 61.242-2*, 61.242-3*, 61.242-7*, 61.242-8*, and 326 IAC 14-9-5, the following information shall be recorded in a log and shall be kept for two (2) years in a readily accessible location:".

(d) "The following information pertaining to all equipment to which a standard applies shall be recorded in a log that is kept in a readily accessible location:".

(e) "A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions,

as indicated by an instrument reading of less than five hundred (500) ppm above background".

(f) "The designation of this equipment for no detectable emissions shall be signed by the owner or operator".

(g) "The dates of each compliance test required in 40 CFR 61.242-2(e)*, 61.242-3(i)*, 61.242-4*, 61.242-7(f)*, and 326 IAC 14-9-5(g)".

(h) "Design criterion required in 40 CFR 61.242-2(d)(5)*, 61.242(e)(2)*, and 326 IAC 14-9-5(e)(4) and an explanation of the design criterion; and".

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-8-4; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3012; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 84)*

326 IAC 14-8-5 Reporting requirements

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 5. For the purposes of this rule, 40 CFR 61.247(b)(5), Reporting Requirements*, shall read, "The results of all performance tests to determine compliance with no detectable emissions and with 40 CFR 61.243-1* and 40 CFR 61.243-2* conducted within the semiannual reporting period.".

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-8-5; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3013; errata, 11 IR 3047; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 84)*

Rule 9. Emission Limitations for Benzene from Furnace Coke Oven By-Product Recovery Plants

326 IAC 14-9-1 Applicability

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 1. The provisions of this rule (326 IAC 14-9) apply to each of the following sources at furnace coke by-product recovery plants located in Lake and Porter Counties: light-oil sumps, final coolers, final-cooler cooling towers, and the following equipment that are intended to operate in benzene service: pumps, valves, exhausters, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges or other connectors, and control devices or systems required by 326 IAC 14-9-5, Standards for Equipment Leaks. For the purposes of its volatile organic compound emissions, once a plant becomes a furnace coke by-product recovery plant, it will continue to be considered a furnace coke by-product recovery plant under this rule (326 IAC 14-9), regardless of the type of coke produced in the future. *(Air Pollution Control Division; 326 IAC 14-9-1; filed Apr 13, 1988, 3:30 pm: 11 IR 3013; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)*

326 IAC 14-9-2 Definitions

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 2. All terms not defined herein shall have the meaning given them in 326 IAC 14-1, in 326 IAC 14-8, and the following terms shall have the specific meanings provided below.

"Annual coke production" means the coke produced in the batteries connected to the coke by-product recovery plant over a twelve (12) month period. The first twelve (12) month period concludes on the first December 31 that comes at least twelve (12) months after the effective date of 326 IAC 14-9, or after the date of initial startup if it is after the effective date.

"In benzene service" means a piece of equipment, other than an exhauster, that either contains or contacts a fluid (liquid or gas) that is at least ten percent (10%) benzene by weight or any exhauster that either contains or contacts a fluid (liquid or gas) at least one percent (1%) benzene by weight as determined by the provisions of 326 IAC 14-9-8(b).

"Coke by-product recovery plant" means any facility designed and operated for the separation and recovery of coal tar derivatives (by-products) evolved from coal during the coking process of a coke oven battery.

"Direct-water final cooler" means a final cooler in which the recirculating water, the cooling medium, is in direct contact with the coke oven gas.

"Equipment" means each pump, valve, exhauster, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in benzene service.

"Exhauster" means a fan located between the inlet gas flange and outlet gas flange of the coke oven gas line that provides motive power for coke oven gases.

"Final cooler" means an equipment used to reduce the temperature of the coke oven gas to improve light-oil absorption in the light-oil scrubber.

"Final-cooler cooling tower" means an equipment used to cool the final cooler water.

"Foundry coke" means coke that is produced from raw materials with less than twenty-six percent (26%) volatile material by weight and that is subject to a coking period of twenty-four (24) hours or more.

"Foundry coke by-product recovery plant" means a by-product recovery plant connected to coke batteries whose annual coke production is at least seventy-five percent (75%) foundry coke.

"Furnace coke" means coke produced in by-product ovens that is not foundry coke.

"Furnace coke by-product recovery plant" means a coke by-product recovery plant that is not a foundry coke by-product recovery plant.

"Light-oil sump" means any tank, pit, enclosure, or slop tank in light-oil recovery operations that functions as a wastewater separation device for hydrocarbon liquids on the surface of the water.

"Semiannual" means a six (6) month period; the first semiannual period concludes on the last day of the last full month during the one hundred eighty (180) days following initial startup for new sources; and the first semiannual period concludes on the last day of the last full month during the one hundred eighty (180) days after the promulgation of this rule (326 IAC 14-9) for existing sources.

"Tar-bottom final cooler" means a final cooler in which the water, after it has cooled the coke oven gas, is forced through a pool of tar.

"Wash-oil circulation tank" means any vessel that functions to hold the wash oil used in light-oil recovery operations or the wash oil used in the wash-oil final cooler.

"Wash-oil decanter" means any vessel that functions to separate, by gravity, the condensed water from the wash oil received from a wash-oil final cooler or from a light-oil scrubber.

"Wash-oil final cooler" means a final cooler in which wash-oil is used as the cooling medium. *(Air Pollution Control Division; 326 IAC 14-9-2; filed Apr 13, 1988, 3:30 pm: 11 IR 3013; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)*

326 IAC 14-9-3 Light-oil sumps

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 3. (a) The provisions of this section apply to the owner or operator of light-oil sumps.

(1) Each owner or operator of a light-oil sump shall enclose and seal the liquid surface in the sump to form a closed system to contain the emissions.

(2) Subdivision (1) shall not apply if, the owner or operator elects to install, operate, and maintain a vent on the light-oil sump cover. Each vent pipe must be equipped with a water leg seal, a pressure relief device, or vacuum relief device.

(3) Subdivision (1) shall not apply if, the owner or operator elects to install, operate, and maintain an access hatch on each light-oil sump cover. Each access hatch must be equipped with a gasket and a cover, seal or lid that must be kept in a closed position at all times, unless in actual use.

(4) The light-oil sump cover may be removed for periodic maintenance but must be replaced with a seal at completion of the

maintenance operation.

(b) The venting of steam or other gases from the by-product process to the light-oil sump is not permitted.

(c) Following the installation of any control equipment used to meet the requirements of subsection (a), the owner or operator shall monitor semiannually the connections and seals on each control system to determine if it is operating with no detectable emissions, using 40 CFR Part 60, Appendix A, Method 21, and the procedures specified in 326 IAC 14-8-3(b) and 40 CFR Part 61, Subpart V, Section 61.245(c). The owner or operator also shall conduct on a semiannual basis a visual inspection of each source including sealing materials for evidence of visible defects such as gaps or tears.

(1) If an instrument reading indicates an organic chemical concentration of more than 500 ppm above a background concentration, as measured by 40 CFR Part 60, Appendix A, Method 21, a leak is detected.

(2) If visible defects such as gaps in sealing materials are observed during visual inspection, a leak is detected.

(3) A first attempt at repair of any leak or visible defect shall be made no later than five (5) calendar days after each leak is detected.

(4) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen (15) calendar days after it is detected.

(Air Pollution Control Division; 326 IAC 14-9-3; filed Apr 13, 1988, 3:30 pm: 11 IR 3014; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

326 IAC 14-9-4 Final coolers and final-cooler cooling towers

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 4. No benzene emissions are allowed from final coolers and final-cooler cooling towers at coke oven by-product recovery plants. *(Air Pollution Control Division; 326 IAC 14-9-4; filed Apr 13, 1988, 3:30 pm: 11 IR 3015; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)*

326 IAC 14-9-5 Equipment leaks

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 5. (a) Each owner or operator of equipment in benzene service shall comply with the requirements of 326 IAC 14-8 and 40 CFR 61, Subpart V*, except as provided in this section.

(b) The provisions of 40 CFR 61.242-3* and 61.242-9*, do not apply to this rule.

(c) Each piece of equipment in benzene service to which this rule applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

(d) Each exhauster shall be monitored quarterly to detect leaks by the methods specified in 326 IAC 14-8-3(a) and 40 CFR 61.245(b)*, except as provided in subsections (e), (f), and (g) and section 6(c) of this rule.

(1) If an instrument reading of ten thousand (10,000) ppm or greater is measured, a leak is detected.

(2) When a leak is detected, it shall be repaired as soon as practicable, but no later than fifteen (15) calendar days after it is detected, except as provided in 40 CFR 61.242-10(a)* and 40 CFR 61.242-10(b)*. A first attempt at repair shall be made no later than five (5) calendar days after each leak is detected.

(e) Each exhauster equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluids to the atmosphere is exempt from the requirements of subsection (d) provided the following requirements are met:

(1) Each exhauster seal system is:

(A) operated with the barrier fluid at a pressure that is greater than the exhauster stuffing box pressure; or

(B) equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR 61.242-11*; or

(C) equipped with a system that purges the barrier fluid into a process stream with zero (0) benzene emissions to the atmosphere.

(2) The barrier fluid is not in benzene service.

(3) Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(4) Each sensor as described in subsection (e)(3) shall be checked daily or shall be equipped with an audible alarm.

(5) The owner or operator shall determine, based on design consideration and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6) If the sensor indicates failure of the seal system, the barrier system, or both, based on the criterion determined under subdivision (5), a leak is detected.

(7) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen (15) calendar days after it is detected, except as provided in 40 CFR 61.242-10*.

(8) A first attempt at repair shall be made no later than five (5) calendar days after each leak is detected.

(f) An exhauster is exempt from the requirements of subsection (d) if it is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of 40 CFR 61.242-11* except as provided in subsection (g).

(g) Any exhauster that is designated, as described in 326 IAC 14-8-4(d) through 326 IAC 14-8-4(g) and in 40 CFR 61.246(e)* for no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, is exempt from the requirements of subsection (d) if the exhauster:

(1) is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, as measured by the methods specified in 326 IAC 14-8-3(b) and in 40 CFR 61.245(c)*; and

(2) is tested for compliance with subdivision (1) initially upon designation, annually, and at other times requested by the commissioner.

(h) Any exhauster that is in vacuum service is excluded from the requirements of this rule if it is identified as required in 326 IAC 14-8-4(d) and in 40 CFR 61.246(e)(5)*.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-9-5; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3015; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 84)*

326 IAC 14-9-6 Compliance determinations

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 6. (a) Each owner or operator subject to the provisions of this rule (326 IAC 14-9) shall demonstrate compliance with the requirements of 326 IAC 14-9-3 through 326 IAC 14-9-5 for each new and existing source, except as provided under 40 CFR 61, Subpart V, Sections 61.243-1 and 61.243-2.

(b) Compliance with this rule (326 IAC 14-9) shall be determined by a review of records, review of performance test results, inspections, or any combination thereof, using the methods and procedures specified in 326 IAC 14-9-8.

(c) For any requests for permission to use an alternative to the work practices required under 326 IAC 14-9-5, the provisions of 40 CFR 61, Subpart V, Section 61.244 shall apply. *(Air Pollution Control Division; 326 IAC 14-9-6; filed Apr 13, 1988, 3:30 pm: 11 IR 3016; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)*

326 IAC 14-9-7 Compliance schedule

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 7. (a) Each owner or operator shall comply with the requirements of 326 IAC 14-9-3 prior to June 30, 1989.

(b) Each owner or operator shall comply with the requirements of 326 IAC 14-9-5 prior to November 30, 1988.

(c) Each owner or operator shall comply with the requirements of 326 IAC 14-9-4 prior to December 31, 1990, and shall

accomplish the following tasks according to the schedule provided in subdivisions (1), (2), (3), and (4) of this section.

(1) Submit by August 31, 1988, a compliance plan to the department of environmental management containing specific control measures for achieving compliance.

(2) Award contracts for emission control systems or process changes for emission control by August 31, 1989.

(3) Begin on-site construction of emission control system or process changes by April 1, 1990.

(4) Complete on-site construction of all emission control systems or process changes and achieve final compliance by December 31, 1990.

(d) Each owner or operator subject to the provisions of this rule (326 IAC 14-9) shall be in compliance with the requirements specified in subsections (a) and (c) of this section if the coke oven by-product recovery plant is not in operation.

(e) Each owner or operator shall submit a written statement providing evidence to the commissioner within 30 days of each applicable date specified in subsections (a), and (b), subdivisions (c)(1), (c)(2), (c)(3) and (c)(4) of this section that the requirements of this section have been implemented. *(Air Pollution Control Division; 326 IAC 14-9-7; filed Apr 13, 1988, 3:30 pm: 11 IR 3016; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571)*

326 IAC 14-9-8 Test methods and procedures

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 8. (a) Each owner or operator subject to this rule shall comply with the requirements in 326 IAC 14-8-3 and 40 CFR 61.245*.

(b) To determine whether or not a piece of equipment is in benzene service, the methods in 40 CFR 61.245(d)* and 326 IAC 14-8-3(c) shall be used, except that, for exhausters, the percent benzene shall be one percent (1%) by weight rather than the ten percent (10%) by weight described in 40 CFR 61.245(d)*.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-9-8; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3016; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Aug 26, 2004, 11:30 a.m.: 28 IR 85)*

326 IAC 14-9-9 Record keeping and reporting requirements

Authority: IC 13-14; IC 13-17-3
Affected: IC 13-14; IC 13-17

Sec. 9. (a) The following information pertaining to the design of control equipment installed to comply with sections 3 and 4 of this rule shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(b) The following information pertaining to sources subject to section 3 of this rule shall be recorded and maintained for two (2) years following each semiannual inspection and each annual maintenance inspection:

(1) The date of the inspection and the name of the inspector.

(2) A brief description of each visible defect in the source or control equipment and the method and date of repair of the defect.

(3) The presence of a leak, as measured using the method described in 326 IAC 14-8-3(b) and 40 CFR 61.245(c)*. The record shall include the date of attempted and actual repair and method of repair of the leak.

(4) A brief description of any system abnormalities found during the annual maintenance inspection, the repairs made, the date of attempted repair, and the date of actual repair.

(c) Each owner or operator of a source subject to section 5 of this rule shall comply with 326 IAC 14-8-4 and 40 CFR 61.246*.

(d) The provisions of this section apply to an owner or operator of any source to which this rule applies.

(1) The owner or operator shall submit a written statement to the commissioner providing information specified in subdivisions (2) through (4).

(2) In the case of an existing source or a new source which has an initial startup date preceding the effective date, the statement shall be submitted within ninety (90) days of the effective date, or on a date specified by the commissioner along with the information required under 40 CFR 61.10(a)(1) through 61.10(a)(6)*.

(3) In the case of new sources that did not have an initial startup date preceding the effective date, the statement shall be submitted with the application for approval of construction, as described in 40 CFR 61.07*.

(4) The owner or operator shall include in the statement the following information for each source:

(A) Type of source such as a light-oil sump, pump or final cooler.

(B) For equipment in benzene service, equipment identification number and process unit identification; percent by weight benzene in the fluid at the equipment; and process fluid state in the equipment (gas/vapor or liquid).

(C) Method of compliance with the standard such as use of a wash-oil final cooler, monthly leak detection and repair, or equipped with dual mechanical seals.

(e) A report shall be submitted to the commissioner semiannually starting six (6) months after the initial reports required in subsection (d) and 40 CFR 61, Subpart A*, which includes the following information:

(1) For sources subject to section 3 of this rule:

(A) a brief description of any visible defect in the source or ductwork;

(B) the number of leaks detected and repaired; and

(C) a brief description of any system abnormalities found during each annual maintenance inspection that occurred in the reporting period and the repairs made.

(2) For equipment in benzene service subject to section 5(a) of this rule, information required by 326 IAC 14-8-5(a) and 40 CFR 61.247(b)*.

(3) For each exhauster subject to section 5 of this rule for each quarter during the semiannual reporting period:

(A) the number of exhausters for which leaks were detected as described in section 5(d) and 5(e)(6) of this rule;

(B) the number of exhausters for which leaks were repaired as required in section 5(d), 5(e)(7), and 5(e)(8) of this rule; and

(C) the results of performance tests to determine compliance with section 5(g) of this rule conducted within the semiannual reporting period.

(4) A statement signed by the owner or operator stating whether all requirements of this rule have been fulfilled during the semiannual reporting period.

(5) Revisions to items reported according to subsection (d) if changes have occurred since the initial report or subsequent revisions to the initial report. Compliance with the requirements of 40 CFR 61.10(c)*, is not required for revisions documented under this subsection.

(f) In the first report submitted as required in subsection (d), the report shall include a reporting schedule stating the months that semiannual reports shall be submitted. Subsequent reports shall be submitted according to that schedule unless a revised schedule has been submitted in a previous semiannual report.

(g) An owner or operator electing to comply with the provisions of 40 CFR 61.243-1* and 61.243-2* shall notify the commissioner of the alternative standard selected ninety (90) days before implementing either of the provisions.

(h) An application for approval of construction or modification, as required under 40 CFR 61.05(a)* and 61.07*, will not be required for sources subject to section 5 of this rule if:

(1) the new or modified source complies with section 5 of this rule; and

(2) in the next semiannual report required by subsection (e), the information described in subsection (d)(4) is included.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-9-9; filed Apr 13, 1988, 3:30 p.m.: 11 IR 3016; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 86)*

Rule 10. Emission Standards for Asbestos; Demolition and Renovation Operations

326 IAC 14-10-1 Applicability

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) To determine which requirements of this section and sections 3 through 4 of this rule apply to the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation, the owner or operator shall use an Indiana licensed asbestos inspector to inspect thoroughly the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos-containing material (ACM). The requirements of sections 3 through 4 of this rule apply to each owner or operator of a demolition or renovation activity, including the removal of regulated asbestos-containing material (RACM). In a facility being demolished, all of the following apply:

(1) All the notification requirements of section 3 of this rule apply and a notification is required even if no asbestos is present.

(2) All the emission control requirements of section 4 of this rule, except as provided in subsection (b) for ordered demolition operations, if the combined amount of regulated asbestos-containing material is any one (1) of the following:

(A) At least three (3) linear feet on or off pipes.

(B) At least three (3) square feet on or off other facility components.

(C) A total of at least seventy-five hundredths (0.75) cubic foot on or off all facility components.

(b) In a facility being demolished under an order of a state or local government agency, because the facility is both structurally unsound and in danger of imminent collapse, all of the following shall apply:

(1) Only the notification requirements in section 3 of this rule and the emission control requirements in section 4(4) through 4(8) and 4(11) through 4(12) of this rule shall apply.

(2) The owner or operator must assume that the debris in the wreckage is contaminated with RACM and dispose of all demolition debris as RACM unless a licensed Indiana inspector has thoroughly inspected the affected facility and certifies that no RACM is present.

(3) All RACM and any asbestos-contaminated debris or assumed RACM shall be properly disposed of at a waste disposal site operated in accordance with the requirements of 40 CFR 61.150* and 329 IAC 10-8 *[329 IAC 10-8 was repealed filed Jan 9, 1998, 9:00 a.m.: 21 IR 1733.]*.

(c) In a facility being renovated, including any individual, nonscheduled renovation operation, the following shall apply:

(1) All the notification requirements of section 3 of this rule apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is any one (1) of the following:

(A) At least two hundred sixty (260) linear feet on or off pipes.

(B) At least one hundred sixty (160) square feet on or off other facility components.

(C) A total of at least thirty-five (35) cubic feet on or off all facility components.

(2) All the emission control requirements of section 4 of this rule apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is any one (1) of the following:

(A) At least three (3) linear feet on or off pipes.

(B) At least three (3) square feet on or off other facility components.

(C) A total of at least seventy-five hundredths (0.75) cubic foot on or off all facility components.

(d) For emergency renovation projects, the following shall apply:

(1) The owner or operator must estimate the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed as a result of the sudden, unexpected event that necessitated the renovation. All the notification requirements of section 3 of this rule apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is any one (1) of the following:

(A) At least two hundred sixty (260) linear feet on or off pipes.

(B) At least one hundred sixty (160) square feet on or off other facility components.

(C) A total of at least thirty-five (35) cubic feet on or off all facility components.

(2) All the emission control requirements of section 4 of this rule apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is any one (1) of the following:

(A) At least three (3) linear feet on or off pipes.

(B) At least three (3) square feet on or off other facility components.

(C) A total of at least seventy-five hundredths (0.75) cubic foot on or off all facility components.

(e) For any planned renovation operations involving individual, nonscheduled operations, the following shall apply:

(1) The owner or operator must estimate the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed during a calendar year of January 1 through December 31.

(2) All the notification requirements of section 3 of this rule apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is any one (1) of the following:

(A) At least two hundred sixty (260) linear feet on or off pipes.

(B) At least one hundred sixty (160) square feet on or off other facility components.

(C) A total of at least thirty-five (35) cubic feet on or off all facility components.

(3) For any planned renovation operations involving individual, nonscheduled operations, all the emission control requirements of section 4 of this rule apply regardless of the size of the job or whether or not the to date cumulative amount of RACM has exceeded the threshold amount of any one (1) of the following:

(A) At least three (3) linear feet on or off pipes.

(B) At least three (3) square feet on or off other facility components.

(C) A total of at least seventy-five hundredths (0.75) cubic foot on or off all facility components.

(f) For any operations described in subsections (a) through (e), if circumstances prohibit accurate measurement of RACM present prior to removal, and it becomes apparent during removal that the amount of RACM exceeds the applicable quantities, removal is to cease immediately and the following shall apply:

(1) All notification requirements of section 3 of this rule apply if the amount of RACM on or off all facility components is any one (1) of the following:

(A) At least thirty-five (35) cubic feet.

(B) At least two hundred sixty (260) linear feet on pipes.

(C) At least one hundred sixty (160) square feet on other facility components.

(2) All emission control requirements of section 4 of this rule apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is any one (1) of the following:

(A) At least three (3) linear feet on or off pipes.

(B) At least three (3) square feet on or off other facility components.

(C) A total of at least seventy-five hundredths (0.75) cubic foot on or off all facility components.

(g) Any person holding a valid Indiana certificate of accreditation, issued under 326 IAC 18-1, on the effective date of this rule shall be considered licensed until the expiration date of their certificate of accreditation.

*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-10-1; filed Dec 5, 1990, 3:40 p.m.: 14 IR 608; filed Mar 28, 1995, 2:00 p.m.: 18 IR 2011; filed May 12, 1998, 9:15 a.m.: 21 IR 3739; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 87)*

326 IAC 14-10-2 Definitions

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-11; IC 13-15; IC 13-17

Sec. 2. Terms used in this rule not defined in this section are defined as set forth in 40 CFR 61, Subpart A*. The following definitions apply throughout this rule:

(1) "Active waste disposal site" means any disposal site other than an inactive site.

(2) "Adequately wet" means to sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from RACM, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

(3) "Asbestos" means an asbestiform variety of the following:

(A) Chrysotile (serpentine).
(B) Crocidolite (ribeckite).
(C) Amosite (cummingtonite-grunerite).
(D) Anthophyllite.
(E) Tremolite.
(F) Actinolite.

(4) "Asbestos-containing waste materials" means any waste that contains commercial asbestos and is generated by a source subject to the provisions of this article. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term includes RACM waste and materials contaminated with asbestos, including disposable equipment and clothing.

(5) "Asbestos-containing material" or "ACM" means asbestos or any material containing more than one percent (1%) asbestos as determined using methods specified in 40 CFR 763, Subpart E, Appendix E, Section I, Polarized Light Microscopy*, including Category I and Category II asbestos-containing material and all friable material.

(6) "Asbestos mill" means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

(7) "Asbestos removal project" means any and all activities at a facility involving the removal, encapsulation, enclosure, abatement, renovation, storage, stripping, dislodging, cutting, or drilling that result in the disturbance or repair of any one (1) of the following:

(A) At least three (3) linear feet of RACM on or off pipes.
(B) At least three (3) square feet of RACM on or off other facility components.
(C) A total of at least seventy-five hundredths (0.75) cubic foot of RACM on or off all facility components.

These activities include, but are not limited to, work area preparation, implementation of engineering controls and work practices, and work area decontamination activities required by section 4 of this rule or 29 CFR 1926.1101*.

(8) "Asbestos tailings" means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

(9) "Asbestos waste from control devices" means any waste material that contains asbestos and is collected by a pollution control device.

(10) "Category I nonfriable asbestos-containing material (ACM)" means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy*.

(11) "Category II nonfriable asbestos-containing material (ACM)" means any material, excluding Category I nonfriable ACM, containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy* that, when dry, cannot be crumbled, pulverized, or reduced to powder by either hand pressure or mechanical forces reasonably expected to act on the material.

(12) "Commercial asbestos" means any material containing asbestos that is extracted from ore and has value because of its asbestos content.

(13) "Cutting" means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

(14) "Demolition" means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

(15) "Emergency renovation operation" means a renovation or operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard or is necessary to protect equipment from damage. This term includes operations necessitated by nonroutine failures of equipment.

(16) "Facility" means any:

(A) school building;
(B) institutional, commercial, public, or industrial building or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four (4) or fewer dwelling units);
(C) ship; and

(A) Chrysotile (serpentine).
(B) Crocidolite (ribeckite).
(C) Amosite (cummingtonite-grunerite).
(D) Anthophyllite.
(E) Tremolite.
(F) Actinolite.

(4) "Asbestos-containing waste materials" means any waste that contains commercial asbestos and is generated by a source subject to the provisions of this article. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term includes RACM waste and materials contaminated with asbestos, including disposable equipment and clothing.

(5) "Asbestos-containing material" or "ACM" means asbestos or any material containing more than one percent (1%) asbestos as determined using methods specified in 40 CFR 763, Subpart E, Appendix E, Section I, Polarized Light Microscopy*, including Category I and Category II asbestos-containing material and all friable material.

(6) "Asbestos mill" means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

(7) "Asbestos removal project" means any and all activities at a facility involving the removal, encapsulation, enclosure, abatement, renovation, storage, stripping, dislodging, cutting, or drilling that result in the disturbance or repair of any one (1) of the following:

(A) At least three (3) linear feet of RACM on or off pipes.
(B) At least three (3) square feet of RACM on or off other facility components.
(C) A total of at least seventy-five hundredths (0.75) cubic foot of RACM on or off all facility components.

These activities include, but are not limited to, work area preparation, implementation of engineering controls and work practices, and work area decontamination activities required by section 4 of this rule or 29 CFR 1926.1101*.

(8) "Asbestos tailings" means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

(9) "Asbestos waste from control devices" means any waste material that contains asbestos and is collected by a pollution control device.

(10) "Category I nonfriable asbestos-containing material (ACM)" means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy*.

(11) "Category II nonfriable asbestos-containing material (ACM)" means any material, excluding Category I nonfriable ACM, containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy* that, when dry, cannot be crumbled, pulverized, or reduced to powder by either hand pressure or mechanical forces reasonably expected to act on the material.

(12) "Commercial asbestos" means any material containing asbestos that is extracted from ore and has value because of its asbestos content.

(13) "Cutting" means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

(14) "Demolition" means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

(15) "Emergency renovation operation" means a renovation or operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard or is necessary to protect equipment from damage. This term includes operations necessitated by nonroutine failures of equipment.

(16) "Facility" means any:

(A) school building;
(B) institutional, commercial, public, or industrial building or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four (4) or fewer dwelling units);
(C) ship; and

(D) active or inactive waste disposal site.

For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation, or building that was previously subject to this article is included regardless of its current use or function.

(17) "Facility component" means any part of a facility, including equipment.

(18) "Friable asbestos material" means any material containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy*, that, when dry, can be crumbled, pulverized, or reduced to powder either by hand pressure or mechanical forces reasonably expected to act on the material. If the asbestos content is less than ten percent (10%) as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

(19) "Fugitive source" means any source of emissions not controlled by an air pollution control device.

(20) "Glove bag" means a sealed compartment with attached inner gloves used for the handling of ACM. Properly installed and used, glove bags provide a small work area enclosure typically used for small scale asbestos stripping operations. Information on glove bag installation, equipment and supplies, and work practices is contained in the Occupational Safety and Health Administration's (OSHA) final rule on occupational exposure to asbestos (Appendix G to 29 CFR 1926.1101*).

(21) "Grinding" means to reduce to powder or small fragments and includes mechanical chipping or drilling.

(22) "HEPA filter" means a high efficiency particulate air filter capable of trapping and retaining at least ninety-nine and ninety-seven hundredths percent (99.97%) of all monodispersed particles of three-tenths (0.3) micrometers in diameter or larger.

(23) "In poor condition" means the binding of the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

(24) "Inactive waste disposal site" means any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the previous twelve (12) months.

(25) "Installation" means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control), including, but not limited to, a group of residential buildings being demolished as part of an urban renewal project or highway project.

(26) "Leak-tight" means that solids or liquids cannot escape or spill out. It also means dust-tight.

(27) "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

(28) "Manufacturing" means the combining of commercial asbestos or, in the case of woven friction products, the combining of textiles containing commercial asbestos with any other materials, including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

(29) "Nonfriable asbestos-containing material" means any material containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy*, that, when dry, cannot be crumbled, pulverized, or reduced to powder by either hand pressure or mechanical forces reasonably expected to act on the material.

(30) "Nonscheduled renovation operation" means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted.

(31) "Ordered demolition" means demolition of a facility under an order of a state or local governmental agency, issued because the facility is both structurally unsound and in danger of imminent collapse.

(32) "Outside air" means the air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

(33) "Owner or operator of a demolition or renovation activity" means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

(34) "Particulate asbestos material" means finely divided particles of asbestos or material containing asbestos.
(35) "Planned renovation operations" means a renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual, nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.
(36) "Regulated asbestos-containing material (RACM)" means the following:

(A) Friable asbestos material.
(B) Category I nonfriable ACM that has become friable.
(C) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, abrading, or burning.
(D) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this article.

The term does not include nonfriable asbestos-containing resilient floor covering materials unless the materials are sanded, beadblasted, or mechanically pulverized so that visible asbestos emissions are discharged or the materials are burned. Resilient floor covering materials, including sheet vinyl flooring, resilient tile, and associated adhesives.
(37) "Remove" means to take out RACM or facility components that contain or are covered with RACM from any facility.
(38) "Renovation" means altering a facility or one (1) or more facility components in any way, including the stripping or removal of RACM from a facility component together with any related handling operation. Operations in which load-supporting structural members are wrecked or taken out are demolitions.
(39) "Resilient floor covering" means asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than one percent (1%) asbestos as determined using polarized light microscopy according to the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy*.
(40) "Roadways" means surfaces on which vehicles travel. The term includes, among other surfaces, public and private highways, roads, streets, parking areas, and driveways.
(41) "Sanitary landfill" has the meaning set forth in 329 IAC 10-2-116.
(42) "School" means any combination of grades kindergarten, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12.
(43) "School building" means the following:

(A) Any structure at a school suitable for use as a classroom, laboratory, library, school eating facility, or facility used for the preparation of food.
(B) Any gymnasium or other facility at a school that is specifically designed for athletic or recreational activities for an academic course in physical education.
(C) Any other facility used by a school for the instruction or housing of students or for the administration of educational or research programs.
(D) Any maintenance, storage, or utility facility, including any hallway, essential to the operation of any facility described in clauses (A) through (C).
(E) Any portico or covered exterior hallway or walkway that is part of a school.
(F) Any exterior portion of a mechanical system used to heat, ventilate, or air condition (HVAC) the interior space of a school.

(44) "Strip" means to take off RACM from any part of a facility or facility components.
(45) "Structural member" means any load-supporting member of a facility, such as beams and load-supporting walls, or any nonload-supporting member, such as ceilings and nonload-supporting walls.
(46) "Visible emissions" means any emissions, which are visually detectable without the aid of instruments, emitted from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed uncombined water vapor.
(47) "Waste generator" means any owner or operator of a source covered by this article whose act or process produces asbestos-containing waste material.
(48) "Waste shipment record" means the shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.
(49) "Work area" means the facility, room, or portion of a facility or room where an asbestos removal project is about to

occur, is in progress, or has been completed, extending to the point where access to the area, as indicated by either the plastic or poly which forms and surrounds the containment area, or demarcation by sign(s) or barrier tape, including, but not limited to, the glove bag operation area, is limited to those workers or supervisors, or other persons authorized by the employer and required by work duties to be present in regulated areas, implementing the asbestos removal project.

(50) "Working day" means Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-10-2; filed Dec 5, 1990, 3:40 p.m.: 14 IR 609; filed Mar 28, 1995, 2:00 p.m.: 18 IR 2013; filed May 12, 1998, 9:15 a.m.: 21 IR 3740; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 88)*

326 IAC 14-10-3 Notification requirements

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 3. Each owner or operator of a demolition or renovation activity to whom this section applies shall do the following:

(1) Provide the department with written notice of the intention to demolish or renovate on a form to be provided by the department and update such notice as necessary, including, but not limited to, the following:

(A) When the amount of affected RACM increases or decreases by at least twenty percent (20%).

(B) If there is a change in the following:

(i) Asbestos removal or demolition start date.

(ii) Removal or demolition contractor.

(iii) Waste disposal site.

(2) Postmark or deliver the notice as follows:

(A) At least ten (10) working days before asbestos stripping or removal work or any other activity, such as site preparation, begins that would break up, dislodge, or similarly disturb asbestos material if the operation is a demolition operation described in section 1(a) of this rule and the facility contains at least three (3) square feet, three (3) linear feet, or seventy-five hundredths (0.75) cubic foot of RACM on or off facility components.

(B) At least ten (10) working days before demolition begins if the operation is a demolition operation described in section 1(a) of this rule and the facility contains less than three (3) square feet, three (3) linear feet, or seventy-five hundredths (0.75) cubic foot of RACM, on or off facility components, or there is no asbestos in the facility.

(C) As early as possible before demolition begins if the operation is an ordered demolition operation described in section 1(b) of this rule.

(D) At least ten (10) working days before asbestos stripping or removal work or any other activity, such as site preparation, begins that would break up, dislodge, or similarly disturb asbestos material, begins if the operation is a renovation operation described in section 1(c) of this rule.

(E) As early as possible before asbestos stripping or removal work begins, but not later than the following working day, if the operation is an emergency renovation operation described in section 1(d) of this rule.

(F) At least ten (10) working days before the end of the calendar year preceding the year for which notice is being given for planned renovation operations involving individual, nonscheduled operations described in section 1(e) of this rule.

(G) Delivery of the notice by the U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. A copy of the previous notification being revised shall be attached to the new, revised notification.

(H) In the case of a revised notice, a copy of the original notice shall be attached.

(3) Include the following information in the notice:

(A) An indication of whether the notice is the original, a revised, or cancelled copy, if applicable.

(B) Name, address, and telephone number of both the facility owner and operator, the asbestos removal contractor

owner or operator, and the demolition contractor owner or operator.

(C) Type of operation:

(i) demolition;

(ii) demolition by intentional burning;

(iii) ordered demolition;

(iv) renovation;

(v) emergency renovation; or

(vi) planned nonscheduled renovation (annual notice).

(D) Description of the facility or affected part of the facility, including the size in square feet, number of floors, age, and present and prior use of the facility.

(E) Procedure, including analytical methods, employed to detect the presence and amount of RACM and Category I and Category II nonfriable ACM.

(F) Estimate of the approximate amount of RACM to be removed in the facility in terms of linear feet of pipe, square feet on other facility components, total cubic feet on all facility components, or total amount on or off all facility components where the length or area could not be measured previously. Also estimate the approximate amount of Category I and Category II nonfriable ACM in the affected part of the facility that will not be removed before demolition.

(G) Location and street address, including building number or name and floor or room number, if appropriate, city, county, and state of the facility being demolished or renovated.

(H) Scheduled starting and completion dates of asbestos removal project, as defined in section 2(7) of this rule, such as site preparation, that would break up, dislodge, or similarly disturb RACM in a demolition or renovation. Planned renovation operations involving individual, nonscheduled operations shall only include the beginning and ending dates of the report period as described in section 1(e) of this rule.

(I) For renovation operations, scheduled starting and completion dates of the renovation project.

(J) For demolition operations, scheduled starting and completion dates of the actual facility demolition.

(K) Description of planned demolition or renovation work to be performed and methods to be employed, including demolition or renovation techniques to be used and a description of the affected facility components.

(L) Description of work practices and engineering controls to be used to comply with this rule, including RACM removal and waste handling emission control procedures.

(M) Description of procedures to be followed in the event that unexpected RACM is found or Category I or Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder.

(N) Name and location of the waste disposal site where the asbestos-containing waste material will be deposited.

(O) A signed certification from the owner or operator that at least one (1) person trained as required by 40 CFR 61.145, paragraph (c)(8)* will supervise the stripping and removal described by this notification.

(P) A signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.

(Q) For facilities described in section 1(b) of this rule, the name, title, and authority of the state or local governmental representative who has ordered the demolition, the date that the order was issued, and the date on which the demolition was ordered to begin. A copy of the order shall be attached to the notification.

(R) For demolition and renovation projects described in section 1(a) through 1(e) of this rule, include the name, address, telephone number, and license number issued under 326 IAC 18 of the following:

(i) Person who inspected the facility for RACM.

(ii) Person who designed the asbestos removal project if RACM is present, if applicable.

(iii) Person who will implement the asbestos removal project if RACM is present.

(S) For emergency renovations described in section 1(d) of this rule, the date and hour that the emergency occurred, a description of the sudden, unexpected event, and an explanation of how the event caused an unsafe condition or would cause equipment damage.

(T) Name, address, and telephone number of the waste transporter.

(4) When the stripping or removal of RACM in demolition or renovation operations described in section 1(a) and 1(c) of

this rule will begin:

(A) on a date after the date specified in the original or the most recent revised notification, provide written notice of the new stripping or removal start date to the department postmarked at least five (5) working days or delivered at least two (2) working days before the start date of asbestos stripping or removal specified in the notification that is being revised; or

(B) on a date earlier than the date specified in the original or the most recent revised notification, provide written notice of the new stripping or removal start date to the department postmarked or delivered at least ten (10) working days before the start date of asbestos stripping or removal work begins.

(5) When the demolition described in section 1(a) of this rule, including the demolition of facilities with no asbestos, will begin on a date later than the date specified in the original or the most recent revised notification, written notice of the new demolition start date must be provided to the department postmarked at least:

(A) five (5) working days; or

(B) delivered at least two (2) working days;

before the start date of demolition specified in the notification that is being revised.

(6) When the demolition described in section 1(a) of this rule, including the demolition of facilities with no asbestos, will begin on a date earlier than the date specified in the original or the most recent revised notification, written notice of the new demolition start date must be provided to the department postmarked at least ten (10) working days before the start date of demolition.

(7) In no event shall RACM removal work (or any other activity, including site preparation that would break up, dislodge, or similarly disturb asbestos material) or demolition activities begin on a date other than the date contained in the most recent written notification.

*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-10-3; filed Dec 5, 1990, 3:40 p.m.: 14 IR 610; filed Mar 28, 1995, 2:00 p.m.: 18 IR 2016; errata filed Apr 12, 1995, 3:30 p.m.: 18 IR 2261; filed May 12, 1998, 9:15 a.m.: 21 IR 3743; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 91)*

326 IAC 14-10-4 Procedures for asbestos emission control

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 4-21.5-3-7; IC 13-15; IC 13-17

Sec. 4. Each owner or operator of a demolition or renovation activity to whom this section applies according to section 1 of this rule, shall comply with the following emission control procedures:

(1) Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. However, RACM need not be removed before demolition if the RACM meets any one (1) of the following requirements:

(A) It is Category I nonfriable ACM that:

(i) is not in poor condition;

(ii) is not friable; and

(iii) will not become friable during demolition.

(B) It is on a facility component that:

(i) is encased in concrete or other similarly hard material; and

(ii) is adequately wet whenever exposed during demolition.

(C) It was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and must be adequately wet at all times until properly disposed of at a waste disposal site operated in accordance with the requirements of 40 CFR 61.150* and 329 IAC 10-8 *[329 IAC 10-8 was repealed filed Jan 9, 1998, 9:00 a.m.: 21 IR 1733.]*.

(D) It is Category II nonfriable ACM and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.

(2) When a facility component that contains, is covered with, or is coated with RACM is being taken out of the facility as a unit or in sections, the following shall occur:

(A) Adequately wet all RACM exposed during cutting or disjoining operations.

(B) Carefully lower each unit or section to the floor and to ground level, not dropping, throwing, sliding, or otherwise damaging or disturbing the RACM.

(3) When RACM is stripped from a facility component while it remains in place in the facility, adequately wet the RACM during the stripping operation. In renovation operations, wetting is not required if the following occur:

(A) The owner or operator has obtained prior written approval from the department based on a written application that wetting to comply with this subdivision would unavoidably damage equipment or present a safety hazard.

(B) The owner or operator uses one (1) or more of the following emission control methods:

(i) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in 40 CFR 61.152*.

(ii) A glove bag system designed and operated to contain the particulate asbestos material produced by the stripping of the asbestos materials.

(iii) Leak-tight wrapping to contain all RACM prior to dismantlement.

(C) In renovation operations where wetting would result in equipment damage or a safety hazard and the methods allowed in clause (B) cannot be used, another method may be used after obtaining written approval from the department based upon a determination that it is equivalent to wetting in controlling emissions or to the methods allowed in clause (B).

(D) A copy of the department's written approval shall be kept at the work site and made available for inspection.

(E) Denial by the department of prior written approval referenced in this subdivision may be appealed under IC 4-21.5-3-7.

(4) After a facility component covered with, coated with, or containing RACM has been taken out of the facility as a unit or in sections under subdivision (2), it shall be stripped or contained in leak-tight wrapping, except as described in subdivision (5). If stripped, perform either of the following:

(A) Adequately wet RACM during stripping.

(B) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in 40 CFR 61.152*.

(5) For large facility components, such as reactor vessels, large tanks, and steam generators, but not beams, that must be handled in accordance with subdivisions (2) through (4), the RACM is not required to be stripped if the following requirements are met:

(A) The component is removed, transported, stored, disposed of, or reused without disturbing or damaging the RACM.

(B) The component is encased in a leak-tight wrapping.

(C) The leak-tight wrapping is labeled according to 40 CFR 61.149(d)(1)(i)*, 40 CFR 61.149(d)(1)(ii)*, and 40 CFR 61.149(d)(1)(iii)* during all loading and unloading operations and during storage.

(6) For all RACM, including material that has been removed or stripped, the following requirements must be met:

(A) Adequately wet the material and ensure that it remains wet until collected and contained or treated for disposal and is disposed of in accordance with 40 CFR 61.150* and 329 IAC 10-8 *[329 IAC 10-8 was repealed filed Jan 9, 1998, 9:00 a.m.: 21 IR 1733.]* (RACM shall be adequately wet throughout all stages of disposal).

(B) Carefully lower the materials to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material.

(C) Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than fifty (50) feet above ground level and was not removed as units or in sections.

(D) RACM contained in leak-tight wrapping that has been removed in accordance with subdivision (3)(B)(iii), (4),

or (7)(B)(ii)(CC) (leak-tight wrapping to contain all RACM prior to dismantlement) need not be wetted.

(7) When the temperature at the point of wetting is below zero (0) degrees Celsius (thirty-two (32) degrees Fahrenheit), the owner or operator must proceed with both of the following:

(A) Remove facility components containing, coated with, or covered with RACM as units or in sections to the maximum extent possible.

(B) During periods when wetting operations are suspended due to freezing temperatures, the following requirements must be met:

(i) Record the temperature in the area containing the facility components at the beginning, middle, and end of each workday and keep daily temperature records available for inspection by the department at the demolition or renovation site and retain the temperature records for at least two (2) years.

(ii) Use one (1) or more of the following emission control methods:

(AA) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit no visible emissions to the outside air and be designed and operated in accordance with the requirements in 40 CFR 61.152*.

(BB) A glove bag system designed and operated to contain the particulate asbestos material produced by the stripping of the asbestos materials.

(CC) Leak-tight wrapping to contain all RACM prior to dismantlement.

(8) For facilities described in section 1(b) of this rule undergoing an ordered demolition, adequately wet the portion of the facility that contains RACM and suspect RACM during the wrecking cleanup, disposal, and related handling operations.

(9) Upon completion of stripping and removal operations for demolition projects described in section 1(a) of this rule and renovation projects described in section 1(c) through 1(f) of this rule, collect visible contamination of asbestos by employing one (1) or both of the following cleaning procedures:

(A) Vacuum all surfaces in the work area using a vacuum equipped with a HEPA filter and remove all standing water.

(B) Wet wipe or wet mop all surfaces in the work area and remove all standing water.

326 IAC 14-10-4

(10) Upon completion of the cleanup requirements identified in subdivision (9), an Indiana licensed supervisor, prior to the removal of the warning signs or other demarcation of the work area, shall perform a final visual inspection of the work area for visible suspect RACM debris. If visible suspect RACM debris is discovered, then the requirements of subdivision (9) shall be repeated until all visible suspect RACM debris has been removed. Upon completion of the above, the licensed supervisor shall certify in writing that the final visual inspection was completed and the work area is free of all visible suspect asbestos debris. This certification shall also include the date of the final visual inspection, the location of the asbestos removal project, and the licensed supervisor's signature. The certification shall be retained by the contractor for a period of at least three (3) years from the date of the final visual inspection and must be made available upon request from the department. A copy of the certification shall also be sent to the building owner.

(11) For any RACM or suspect RACM, the following requirements must be met:

(A) Any stripped, disturbed, or removed friable asbestos materials that are in a leak-tight wrapping and left at a facility or stored elsewhere prior to disposal must be securely stored in a manner that restricts access by unauthorized persons to the material. The material must be stored in locked containers, rooms, trucks, or trailers. Asbestos warning signs or labels must be prominently displayed on the door of the locked containers, rooms, trucks, or trailers. If such secure areas are not available, other security measures must be employed, including the use of barriers, security guards, or other measures approved by the department. Asbestos warning labels must be posted in all areas where asbestos is stored.

(B) When an ongoing asbestos project is interrupted for any nonemergency situation, all RACM that was disturbed, stripped, or removed must be wetted and placed into leak-tight wrapping and stored in a manner consistent with clause (A). If the RACM that was stripped, disturbed, or removed is not, or cannot be, collected and placed into leak-tight wrapping and stored during the abatement interruption, a licensed Indiana worker or supervisor must remain at the job site to prevent unauthorized persons from entering the work area. Asbestos warning signs or labels must be posted on all entrances and exits to the work area.

(12) If a facility is demolished by intentional burning, all RACM, including Category I and Category II nonfriable ACM,

must be removed in accordance with this rule before burning. Asbestos-containing material may not be burned.

(13) No asbestos removal project shall be implemented at a facility regulated by this rule unless at least one (1) Indiana licensed asbestos project supervisor, trained in the provisions of this rule and 40 CFR 61, Subpart M*, and the means of complying with them, is present on-site in the work area during the asbestos removal project. Every year, the Indiana licensed project supervisor shall receive refresher training from an Indiana approved asbestos project supervisor course as provided for in 326 IAC 18 and 40 CFR 61, Subpart M*. The required training shall include, as a minimum, the following:

(A) Applicability.

(B) Notifications.

(C) Material identification.

(D) Control procedures for removals, including, at least, wetting, local exhaust ventilation, negative pressure enclosures, glove bag procedures, and high efficiency particulate air (HEPA) filters.

(E) Waste disposal work practices.

(F) Reporting and record keeping.

(G) Asbestos hazards and worker protection.

Evidence that the required training has been completed shall be posted and made available for inspection by the department at the demolition or renovation site.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. *(Air Pollution Control Division; 326 IAC 14-10-4; filed Dec 5, 1990, 3:40 p.m.: 14 IR 611; filed Mar 28, 1995, 2:00 p.m.: 18 IR 2018; filed May 12, 1998, 9:15 a.m.: 21 IR 3745; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1571; filed Aug 26, 2004, 11:30 a.m.: 28 IR 93)*

326 IAC 14-10-5 Demolition/renovation fees

Authority: IC 13-1-1-4; IC 13-7-7
Affected: IC 13-1-1-1; IC 13-1-1-4; IC 13-7-1-1; IC 13-7-7-2

Sec. 5. (a) An owner or operator of a facility subject to this rule shall pay a fee for each project for which a notification is required under section 1 of this rule as follows:

(1) For stripping and removal operations involving greater than or equal to two thousand six hundred (2,600) linear feet of friable asbestos containing materials on pipes, one thousand six hundred (1,600) square feet of friable asbestos containing materials on other facility components, or four hundred (400) cubic feet of friable asbestos containing materials on or off all facility components, the owner or operator shall pay a fee of one hundred fifty dollars ($150).

(2) For stripping and removal operations involving less than two thousand six hundred (2,600) linear feet of friable asbestos containing materials on pipes, one thousand six hundred (1,600) square feet of friable asbestos containing materials on other facility components, or four hundred (400) cubic feet of friable asbestos containing materials on or off all facility components, the owner or operator shall pay a fee of fifty dollars ($50).

(b) The department shall bill the owner or operator who submits notifications pursuant to section 1 of this rule on a quarterly basis as determined by the number of notifications received during the previous quarter. Fees shall be paid by mail or in person and shall be paid upon billing by check or money order, payable to "Cashier, Indiana Department of Environmental Management" no later than thirty (30) days after receipt of billing. *(Air Pollution Control Division; 326 IAC 14-10-5; filed Nov 30, 1990, 4:20 p.m.: 14 IR 607)*

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ATTACHMENT 6

IDEM Guidance *Disposal of Nonfriable Asbestos-Containing Materials* (1 page)

This document was downloaded from the IDEM OLQ website and reformatted for presentation here.

IDEM **Guidance**

Indiana Department of Environmental Management
Office of Land Quality
P.O. Box 6015
Indianapolis, IN 46206-6015
OLQ PH: (317) 232-8941

Disposal of Nonfriable Asbestos-Containing Materials

Asbestos Containing Floor Tiles and Asphalt-Based Roofing Products

Asbestos containing resilient floor coverings and asphalt based roofing products which are nonfriable and will not be made friable through sanding, grinding, cutting, or abrading are not regulated as asbestos-containing material under the National Emission Standard for Asbestos (NESHAP) or Solid Waste Management Rule 329 IAC 10-8.1-12. Therefore, floor tiles, asphalt-based siding and asphalt-based roofing materials which are in good condition may be removed and sent to a permitted solid waste disposal site as solid waste. No bagging, labeling, special handling, permits, or additional fees are required by this Office. However, this Office strongly encourages disposing of these materials at a permitted municipal solid waste landfill since such facilities have operational requirements which decrease the probability of causing a public health or environmental threat. If these materials are in poor condition (indicated by peeling, cracking, or crumbling), and/or if the materials will be or have been made friable, they must be handled and disposed of as friable asbestos.

Asbestos Containing Transite and Slate Board Roofing

Nonfriable asbestos-containing transite and slate board roofing materials have a high probability of becoming crumbled, pulverized or reduced to powder during disposal (i.e., unloading and compaction). Therefore, if these materials are from a commercial, industrial, or institutional structure, they must be disposed at a permitted municipal solid waste landfill. Such landfills are required to comply with the state asbestos disposal requirements of 329 IAC 10-8.1-12. With these materials the generator must: 1) give the disposal facility sufficient notice before disposal; 2) ensure an asbestos waste shipment disposal record accompanies each load to the landfill; and 3) properly label the material with the generator's name, address and telephone number, the contractor's name, address and telephone number (if a contractor was used) and indicate that asbestos-containing materials are enclosed. Although residential structures are exempt from the state asbestos disposal requirements of 329 IAC 10-8.1-12, homeowners are not exempt from 329 IAC 10-4-2 which states, "No person shall cause or allow the storage, containment, processing, or disposal of solid waste in a manner which creates a threat to human health or the environment." Therefore, it is strongly recommended that asbestos containing transite and slate board from residential structures also be handled in the same fashion as asbestos from nonresidential structures.

Additional questions concerning disposal of asbestos-containing materials should be addressed to Mr. Scott Draschil at 317/308-3008. To obtain information concerning the proper handling of friable asbestos containing materials during renovation or demolition projects and for state/federal asbestos removal project notification requirements please contact Mr. Dan Lamberson of the Office of Air Management. Mr. Lamberson may be reached at 317/233-4385.

***Before beginning any project where asbestos is involved always contact your local health department to be sure any local ordinances governing asbestos are being followed.**

OLQ General ID#0013-03-SW January 18, 2000

[Note: Although the specific rule cited has been repealed and a substitute put in its place, and IDEM personnel assignments change over time, the general principles of this guidance would still apply. Environmental Management Institute*]*